```
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 11, Appli
Sequence 15, Appli
Sequence 69, Appli
Sequence 69, Appli
Sequence 69, Appli
Sequence 69, Appli
Sequence 64, Appli
Sequence 64, Appli
Sequence 64, Appli
Sequence 117, Appli
Sequence 117, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 16, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 529, App
Sequence 96, Appl
Sequence 4, Appli
Sequence 1, Appli
Sequence 2, Appli
                                                                                                                       (without alignments) 530.147 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score.of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                   December 20, 2002, 15:16:49 ; Search time 7.30435 Seconds
                                                                                                                                                                                                             ... AMYTRVSKFSTWINQVMAYN 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/1/pubpaa/USOB_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO9_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*/cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*/cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*/cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 US-09-925-297-529

0 US-09-961-721-4

US-09-967-7386-1

0 US-09-967-7386-1

0 US-09-946-893-2

US-09-946-893-2

US-09-91-721-1

0 US-09-978-172-1

0 US-09-923-779-152

US-09-921-721-5

US-09-978-192A-69

US-09-978-192A-69
                                                                                                                                                                                                                                                                                                                                 hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                 106657 seqs, 16763532 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                   US-09-856-319B-4_COPY_34_264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published_Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                     - protein search, using sw model
                                                                                                                                                                                                           1 IVNGENAVPGSWPWQVSLQD....
                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464.5
464.5
462.5
462.5
462
462
462
462
453.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44557.5
44557.5
4555.5
55.5
455
455
655
                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                 rotal number
                                                                     OM protein
                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
```

```
Sequence 2, Appli
Sequence 6, Appli
Sequence 934, Appl
Sequence 934, Appl
Sequence 934, Appl
Sequence 932, Appl
Sequence 932, Appl
Sequence 932, Appl
Sequence 932, Appl
Sequence 895, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                     Sequence 108, App
Sequence 126, App
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVTAAHCNVSPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 529, Application US/09925297

Patent No. US20020081659A1

GENERAL INFORMATION:

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies

FILE REFERENCE: PA105

CURRENT FILING DATE: 2001-08-10

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 1000-03-08

PRIOR FILING DATE: 1009-03-12

NUMBER OF SEQ ID NOS: 928

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60.4%; Score 756; DB 10; Length 1
84.4%; Pred. No. 4.4e-62;
Live 16; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGA 160
0. US-09-888-615-103

0. US-09-948-094-2

US-09-941-721-6

US-10-045-367A-5

US-09-910-151-6

US-09-759-143-934

US-09-759-143-934

US-09-759-143-934

US-09-759-143-932

US-09-759-143-932

US-09-759-143-932

US-09-759-143-932

US-09-759-143-995

US-09-759-143-995

US-09-759-143-995

US-09-759-143-995

US-09-81-333-23

US-09-981-333-23

US-09-981-333-23

US-09-981-333-23

US-09-981-333-23

US-09-888-615-110
                                                                                                                                                                                                                                                                                     US-09-820-893-108
US-09-870-759-126
US-09-988-975A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-820-893-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 84.4 Matches 135; Conservative
  ; ORGANISM: Homo sapiens
US-09-925-297-529
  RESULT 1
US-09-925-297-529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 529
LENGTH: 192
                                                                                                                                                                                                             428.5
427.5
424
                                                                                                                                                                                                                                                  423.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

; Sequence 96, Application US/0988615

RESULT 2 US-09-888-615-96

```
Sequence 2, Application US/09946893
Patent No. US20020072494A1
Patent No. US20020072494A1
Patent No. US20020072494A1

REPERATION:
APPLICANT: Cao, Yihai
TITLE OF INVENTION: Materials and methods relating to endothelial cell growth
FILE REFERENCE: Mewburn inhibitors
FILE REFERENCE: Mewburn NUMBER: US/09/946,893
CURRENT APPLICATION NUMBER: US/09-05
                                                                                                                                    :|| | : || | || : || || 180
121 ICLPSASSDLPVGTTCTVSGWGRRPTKNLGLSDTLQEVVVPVVSRETCRSAYEYGGTDDK 180
                                                ---ITDAMICAGG-SGASSCQGDSGGPLVCQKGN---TWVLIGIVSWGTKNC-NIQAPAM 213
                                                                                                                                                                                                                             58 DRSSNAEP-VQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY--WGARITDAMICAG--GS 172
                       LGEYDRSSNAEPVQVLSIARA-ITHPNWNANTM-----NNDLTLLKLASPARYTAQ-VSP 106
                                                                                                             VCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR---QYWGAR-- 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          675 ADRTECFITGWGETQGTFGA--GLLKEAQLPVIENKVCNRYEFLNGRVQSTELCAGHLAG 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173 GASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: About Laboratories
APPLICANT: Henkin, Jack
APPLICANT: Henkin, Jack
APPLICANT: Henkin, Jack
APPLICANT: Henkin, Jack
APPLICANT: DAVIdson, Donald J.
TITLE OF INVENTION: ANTIANGIOGENIC POLYPEPTIDES AND METHODS
TITLE OF INVENTION: FOR INHIBITING ANGIOGENESIS
FILE REPERBENCE: 6738.US.02
CURRENT APPLICATION NUMBER: US/09/967,386
CURRENT FILING DATE: 2001-09-26
PRIOR FILING DATE: 2000-09-29
NUMBER OF SEQ ID NOS: 7
SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 791;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37.1%; Score 464.5; DB 9;
41.8%; Pred. No. 1e-34;
tive 29; Mismatches 93;
                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-967-386-1; Sequence 1, Application US/09967386; Sequence 1. OS2002015992A1
; Patent No. US2002015992A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 41.89
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens
US-09-967-386-1
                                                                                                                                                                                                                                                                                                                      ||||| : ||
241 YTRVSSYLDWI 251
                                                                                                                                                                                                                                                                                          214 YTRVSKFSTWI 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-946-893-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 1
                       54
                                                                                                                                                                                                      162
                                                              g
                                                                                                                                                  q
                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δý
                                                                                                             ò
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SNAEPVOVLSIARAITHPNWNANTWNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120 |: | : | | | | | : | : | : | | | | | sbeenigVlkiakvfknpkfsiltvnnditllklatparfsQtvsavclpsadddfpagt 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 PGSW--PWQVSLQDNTG----FHFCGGSLISPNWVVTAAHC----QVTPGRHF-----VV 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Meyers, Rachel A.
TITLE OF INVENTION: m32404, A NOVEL HUMAN TRYPSIN AND USES
TITLE OF INVENTION: m32404, A NOVEL HUMAN TRYPSIN AND USES
FILE REFERENCE: 10448-096001
CURRENT APPLICATION NUMBER: U5/09/961,721
CURRENT APPLICATION NUMBER: 00.234
PRIOR APPLICATION NUMBER: 60,235,023
PRIOR FILING DATE: 2000-09-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 37.1%; Score 464.5; DB 9; Best Local Similarity 44.2%; Pred. No. 2.5e-35; Matches 111; Conservative 26; Mismatches 79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60.3%; Score 755.5; DB 1 llarity 58.4%; Pred. No. 7.3e-62; Conservative 35; Mismatches 60
             GENERAL INFORMATION:
APPLICANT: PLOWMAN, GERECORY
APPLICANT: WHYTE, DAVID
APPLICANT: CAENEPEEL, SEAN
APPLICANT: CHARYDCZAK, GLEN
APPLICANT: CHARYDCZAK, GLEN
APPLICANT: MANNING, GERARD
APPLICANT: MANNING, GERARD
APPLICANT: MANNING, GERARD
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: US/09/88,615
CURRENT FILING DATE: 2001-06-26
PRIOR FILING DATE: 2000-06-26
NUMBER OF SEQ ID NOS: 150
SOFTWARE: PALENT VET. 201
SEQ ID NO 96
LENGTH: 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Consensus sequence US-09-961-721-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09961721
Patent No. US20020156005A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
US20020064856A1
                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-888-615-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity
Matches 135; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
US-09-961-721-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

7;

.; 9

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58 DRSSNAEP-VQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY--WGARITDAMICAG--GS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   694 ADRTECFITGWGETQGTFGA--GLLKEAQLPVIENKVCNRYEFLNGRVQSTELCAGHLAG 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173 GASSCOGDSGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O'Reilly, Micheal
Cao, Yihai
Sim, B. Kim Lee
TITLE OF INVENTION: Anglostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                          Length 810;
                                                                                                                                                                                                                                                                                                                                                                                                  37.1%; Score 464.5; DB 10; Length 41.8%; Pred. No. 1e-34; Live 29; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONNTRY: U.S.
2IP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PA PC COMPATIBLE
COMPUTER: PATENTIAL PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY AGENT INCOMBER: US/08/612,788
FILING DATE: <un black control of the cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/335,325
FILING DATE: 17-Jun-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
; PRIOR APPLICATION NUMBER: US 60/230,893; PRIOR FILING DATE: 2000-09-05; NUMBER OF SEQ ID NOS: 11; SOFTWARE: Patentin Ver. 2.1; SEQ ID NO 2; LENGTH: 810; TYPE: PRT ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/09335355
Patent No. US20020164717A1
GENERAL INFORMATION:
APPLICANT: Folkman, M. Judah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 1
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 37.1
Best Local Similarity 41.8
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Atlanta
STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-335-325-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
```

```
696 ADRIICYITGWGETQGTFGA--GRLKEAQLPVIENKVCNRVEYLNNRVKSTELCAGQLAG 753
                                                                                                                                                                                                                                                                                                                                                  57 YDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR--QYWGARITDAMICAG--GS 172
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGE 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173 GASSCOGDSGGPLVCOKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Folkman, M. Judah
O'Really, Michael
TITLE O'Really, Machael
TITLE OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                           16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM ITER: FLORY GISTER

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/788,142

FILING DATE: 16-Feb-2001

CLASSIFICATION CUNNOWN>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/866,735

FILING DATE: CUNNOWN>

ATTORNEY/AGENT INFORMATION:

NAME: Warren, William L.

REGISTRATION NUMBER: 36,714

REGISTRATION NUMBER: 36,714

REGISTRATION NUMBER: 05940-0129
                                                                                                                                                                                                                                Length 812;
                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Jones & Askew, LLP
STREET: 191 Peachtree Street, 37th Floor
                                                                                                                                                                                                                           36.9%; Score 462; DB 9;
41.0%; Pred. No. 1.8e-34;
tive 32; Mismatches 93
                                                                                                                                        CLONE: Plasminogen
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (404) 818-3700
04) 818-3799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09788142 Patent No. US20010029246A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS: <Unknown>
                                             N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 1
                                                                                        ORGANISM: Murine IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                           98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Atlanta
STATE: Georgia
HYPOTHETICAL: NO
                       ANTI-SENSE: NO
FRAGMENT TYPE: NO
ORIGINAL SOURCE:
                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                   US-09-335-325-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-788-142-1
```

```
TITLE OF INVENTION: Angiostatin and Endostatin Binding Proteins and Methods of Use FILE REFERENCE: 05213-0378 (43170-25933)
CURRENT APPLICATION NUMBER: US/09/873,676
PRIOR APPLICATION NUMBER: US 60/209,065
PRIOR FILING DATE: 2000-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          696 ADRIICYITGWGETQGTFGA--GRLKEAQLPVIENKVCNRVEYLNNRVKSTELCAGQLAG 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57 YDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :: || :| :| || || 642 HEEYIRGLDVQEISVAKLILEPN-----NRDIALLKLSRPATITDKVIPACLPSPNYMV 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR--QYWGARITDAMICAG--GS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  696 ADRTICYITGWGETQGTFGA--GRLKEAQLPVIENKVCNRVEYLNNRVKSTELCAGQLAG 753
                                                                  1 IVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLISPNWVVTAAHC---OVTPGRHFVVLGE 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            173 GASSCOGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GASSCOGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER
FILE REFERENCE: 210121.553
CURRENT APPLICATION NUMBER: US/09/923,779
CURRENT FILING DATE: 2001-08-06
NUMBER OF SEQ ID NOS: 155
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36.9%; Score 462; DB 10; 41.0%; Pred. No. 1.8e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36.7%; Score 459.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 60/289,387 PRIOR FILING DATE: 2001-05-08 NUMBER OF SEQ ID NOS: 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 152, Application US/09923779
Patent No. US20020076721A1
GENERAL INFORMATION:
APPLICANT: Pyle, Ruth A.
                                                                                                                                                                                                  Sequence 81, Application US/09873676 Patent No. US20020077289A1
                                                                                                                                                                                                                                                                     APPLICANT: MacDonald, Nicholas J. APPLICANT: Sim, Kim L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin version 3.1
SEQ ID NO 81
LENGTH: 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 41.05
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Murinae gen. sp. US-09-873-676-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens
US-09-923-779-152
                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-923-779-152
                                                                                                                                                                                US-09-873-676-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 152
LENGTH: 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     754
                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
    g
                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: FOlkman, M. Judah
APPLICANT: FOlkman, M. Judah
APPLICANT: FO'Reilly, Michael
APPLICANT: No'Reilly, Michael
APPLICANT: No'Reilly, Michael
APPLICANT: No'Reilly, Michael
AITHE REPERBNCE: 05940-0151 (43171-222068)
CURRENT APPLICATION WUMBER: 109/09/761,120
CURRENT FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: 09/309,821
PRIOR APPLICATION NUMBER: 08/866,735
PRIOR APPLICATION NUMBER: 08/866,735
PRIOR APPLICATION NUMBER: 08/866,735
PRIOR FILING DATE: 1997-05-30
NUMBER OF SEQ ID NOS: 47
SEQ THARE: Patentin version 3.0
SEQ THARE: Batentin version 3.0
                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR--QYWGARITDAMICAG--GS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 YDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR--QYWGARITDAMICAG--GS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                   57 YDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  696 ADRTICYITGWGETQGTFGA - - GRLKEAQLPVIENKVCNRVEYLNNRVKSTELCAGQLAG 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  582 VVGGCVANPHSWPWQISLRTRFTGQHFCGGTLIAPEWVLTAAHCLEKSSRPEFYKVILGA 641
                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                            173 GASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 IVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGE 56
                                                                                                                                                                                                                                                                                                                   16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                     Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 812;
                                                                                                                                                                                                                                                                                                                   93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93;
                                                                                                                                                                                                                                                                     ch 36.9%; Score 462; DB 10;
1 Similarity 41.0%; Pred. No. 1.8e-34;
98; Conservative 32; Mismatches 93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36.9%; Score 462; DB 10;
41.0%; Pred. No. 1.8e-34;
tive 32; Mismatches 93;
                                                                                                                                                                                CLONE: Plasminogen
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09761120 Patent No. US20020037847A1 GENERAL INFORMATION:
                                                                                           FRAGMENT TYPE: N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
OTHER INFORMATION: Plasminogen
                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 41.0%
Matches 98; Conservative
                                                                                                                                     ORGANISM: Murine
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Murinae gen. sp.
                                                                                                                                                         IMMEDIATE SOURCE:
                                                                                                                ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                    ANTI-SENSE: NO
                                                                                                                                                                                                                         US-09-788-142-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
US-09-761-120-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-761-120-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
```

; 6

```
US-09-978-295A-69; Sequence 69, Application US/09978295A; Patent No. US20020156006A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match
Best Local Similarity 42.3%
Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Botstein, David
Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229 A 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                   6
                                                                                                                                                                                                                                                                      172 SGASSCOGDSGGPLVC-OKGNTWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 SSNAEPVQVLSIARA-ITHPNWNANTM----NNDLTLLKLASPARYTAQ-VSPVCLAST 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | : : | |||:| || SLTEGTEQKFDVKKTIIVHPNYNPDTLDNGAYDNDIALLKLKSPGVTLGDTVRPICLPSA 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 NEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR----QYWGAR----ITD 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SDLPVGTTCTVSGWGRRPTKNLGLSDTLQEVVVPVVSRETCRSAYEYGGTDDKVEFVTD 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMICAGG-SGASSCQGDSGGPLVCQKGN---TWVLIGIVSWGTKNC-NIQAPAMYTRVSK 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 NMICAGALGGKDACQGDSGGPLVCSDGNRDGRWELVGIVSWGSYGCARGNKPGVTRVSS 244
                                                                                                                         DRSSNAEPVQVLSI--ARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                  208 YIRSGCNGDSGGPLNCPTEDGGWQVHGVTSFVSGFGCNFIWKPTVFTRVSAFIDMIEETI 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13 PWQVSLQDNTG----FHFCGGSLISPNWVVTAAHC----QVTPGRHF-----VVLGEYDR 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 PWQVSLQVRSGGGSRKHFCGGSLISENWVLTAAHCVSGAASAPASSVRVSLSVRLGEHNL 64
                                                                                       29 VVHGEDAVPYSWPWQVSLQYEKSGSFYHTCGGSLIAPDWVVTAGHCISRDLTYQVVLGEY 88
                                                     1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                  EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 249;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INCORDINGUES.
GENERAL INCORDINGUES.
TITLE OF INVENTION: m32404, A NOVEL HUMAN TRYPSIN AND USES:
TITLE OF INVENTION: m48-096001
GURRENT APPLICATION NUMBER: U5/09/961,721 '
CURRENT FILING DATE: 2001-09-24
PRIOR PILING DATE: 2000-09-25
NUMBER OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 5
LENGTH: 249
                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9;
Local Similarity 42.3%; Pred. No. 7.8e-35; nes 102; Conservative 38; Mismatches 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36.5%; Score 457.5; DB 9
44.1%; Pred. No. 1.1e-34;
iive 25; Mismatches 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Consensus sequence US-09-961-721-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/09961721
Patent No. US20020156005A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 44.1%
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245 YLDWI 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 FSTWI 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-961-721-5
                                                                                                                                                                                                                                                                                                                                              229 A 229
                                                                                                                                                                                                                                                                                                                                                                                   A 268
 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                  114
                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                                                                                   268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                         ò
                                                                                                                                                        QQ
                                                                                                                                                                                                  à
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                  ò
```

RESULT 12

```
LOCATION: (27)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION: (34)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
US-09-925-297-695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211 YIRSGCNGDSGGPENCPTEDGGWQVHGVTSFVSGFGCNFIWKPTVFTRVSAFIDWIEETI 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 DRSSNAEPVQVLSI--ARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGASSCQGDSGGPLVC-QKGNTWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.5%; Score 457.5; DB 10; Length 273; 42.3%; Pred. No. 1.2e-34; 1ve 37; Mismatches 89; Indels 13;
Sequence 695, Application US/09925297

Patent No. US20020081659A1

GENERAL INFORMATION:

APPLICANT: Rosen et al.

TITLE OF INVENTION:

CURRENT APPLICATION Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA105

CURRENT APPLICATION NUMBER: US/09/925,297

CURRENT FILING DATE: 2001-08-10

PRIOR FILING DATE: 2000-03-08

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 928

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerber, Hanspeter
Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fong, Sherman
Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
```

6

```
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-30
APPLICATION NUMBER: 60/084366
FILING DATE: 1998-05-05
                                                                                                       FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080333
                                                                                                                                                                         FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/081070
                                                                                                                                                                                                                            LICATION NUMBER: 60/081049
                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/082796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/083336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/083495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/083499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLICATION NUMBER: 60/083545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/083558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/083500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/083742
                                                                                                                                                                                                                                                            LICATION NUMBER: 60/081071
                                                                                                                                                                                                                                                                                                                                                                                                                                  60/081817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/083554
                                                                                                                                                                                                            1998-04-08
                                                                                                                                                                                                                                              1998-04-08
                                                                                                                                                                                                                                                                              998-04-08
                                                                                                                                                                                                                                                                                                                                                  1998-04-09
                                                                                                                                                                                                                                                                                                                                                                                1998-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-04-29
   1998-03-31
                                                                                                                                         LING DATE: 1998-04-01
PLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-04-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-04-29
                                     1998-03-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                    1998-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ING DATE: 1998-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-04-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      998-04-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368-04-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-04-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-04-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-04-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-04-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-04
APPLICATION NUMBER:
FILING DATE: 1998-04
                                     LLING DATE: 1998-03
                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-04
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LICATION NUMBER:
ING DATE: 1998-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-04
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                         FILING DATE: 1998-04
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                             LICATION NUMBER:
ING DATE: 1998-04
                                                                                                                                                                                                                                                                                                                                                                                                                                  LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LICATION NUMBER:
ING DATE: 1998-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-04
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ING DATE: 1998-0.
LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-0.
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LICATION NUMBER:
   FILING DATE:
                                                                                                                                                                                                                                              ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                                                                  APPLICANT: WOOG, William I.

TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE DE INVENTION: Acids Encoding the Same FILE REFERENCE: P2630PLG11: CURRENT APPLICATION NUMBER: US/09/978,295A
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/91885
PRIOR RILING DATE: 2001-0-17
PRIOR PLICATION NUMBER: 60/06250
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-03
PRIOR PELICATION NUMBER: 60/065311
PRIOR APPLICATION NUMBER: 60/065314
PRIOR PELICATION NUMBER: 60/06364
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/078939
APPLICATION NUMBER: 60/078939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-03-13
APPLICATION NUMBER: 60/078886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/078936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-03-30
APPLICATION NUMBER: 60/079923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-03-30
APPLICATION NUMBER: 60/080105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-31
APPLICATION NUMBER: 60/080165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/077450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/077632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/077649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/079728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-03-31
APPLICATION NUMBER: 60/080107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/077641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/077791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/078004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079664
                                                                                                                                                                                                                         Williams, P. Mickey Wood, William I.
                                                                                                                                                     Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                Kuo, Sophia S.
Napier, Mary A.
Pan, James;
Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-11-21 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-03-1
                                                                     Kljavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-03-1
                                                                                                                                                                                                         rumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LING DATE:
                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT
                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                       APPLICANT
APPLICANT
                                   APPLICANT
                                                   APPLICANT
                                                                     APPLICANT
                                                                                                                     APPLICANT
                                                                                                                                         APPLICANT
```

60/081195

60/080334

60/081229 60/081955 60/081819

60/081838

60/082568

60/081952

60/082569

60/082704 60/082804 60/082700

60/082797

60/083392

```
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2630P1C27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/978,697 CURRENT FILING DATE: 2001-10-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT AFFLICATION NUMBER: 09/918585
PRIOR APPLICATION NUMBER: 09/918585
PRIOR APPLICATION NUMBER: 06/062250
PRIOR APPLICATION NUMBER: 06/062250
PRIOR PILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 06/065341
PRIOR PILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 06/07634
PRIOR PILING DATE: 1998-03-10
PRIOR PILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 06/077649
PRIOR PILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 06/077649
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 06/077649
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 06/077649
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 06/078936
PRIOR PILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 06/078936
PRIOR PILING DATE: 1998-03-20
PRIOR PELING DATE: 1998-03-20
PRIOR PELING DATE: 1998-03-20
PRIOR PELING DATE: 1998-03-20
PRIOR PELING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 06/079666
PRIOR PELING DATE: 1998-03-27
                                                                    Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Renneth J
                                                                                                                                                                                                                                                                                                                                                                                                                     Tumas, Daniel
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                           Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                      Paoni, Nicholas F
                                                  Gerber, Hanspeter
                                                                                                                                                                                                                      Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                      Napier, Mary A.
                         Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                               Pan, James
                                                                                                APPLICANT
                                                                                                                          APPLICANT
                                                                                                                                              APPLICANT
                                                                                                                                                                          APPLICANT
                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                         APPLICANT
                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    276 SLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSEENFP 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58 DRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALP 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 SGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG--GSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    334 DGKVCWTSGWGATEDGGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAGYLTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174 ASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 36.4%; Score 455.5; DB 9; Best Local Similarity 37.9%; Pred. No. 3.4e-34; Matches 89; Conservative 39; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085700
PRIOR PILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/08569
PRIOR FILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
                                                                                                                                                                                  R APPLICATION NUMBER: 60/084640
R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/084598
R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/084600
R FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                   R APPLICATION NUMBER: 60/084627
R FILING DATE: 1998-05-07
A APPLICATION NUMBER: 60/084643
R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/085339
R FILING DATE: 1998-05-13
R FILING DATE: 1998-05-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/085323
FILING DATE: 1998-05-13
APPLICATION NUMBER: 60/085582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-05-15
APPLICATION NUMBER: 60/085704
FILING DATE: 1998-05-15
                                                                                                             FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/084639
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 69, Application US/09978697
Patent No. US20020169284A1
GENERAL INFORMATION:
                                             APPLICATION NUMBER: 60/08441
FILING DATE: 1998-05-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/085697
APPLICATION NUMBER: 60/084414
                                                                                              APPLICATION NUMBER: 60/084637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baker Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ashkenazi, Avi APPLICANT: Baker Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-978-697-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
276 SLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSEENFP 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 DRSSNAEPVQVLSIARAITHPNWNANTWNNDLTLLKLASPARYTAQVSPVCLASTNEALP 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        174 ASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393 VDSCQGDSGGPLVCQERRLWKLVGATSFGIGCAEVNKPGVYTRVTSFLDWIHEQM 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 36.4%; Score 455.5; DB 5
Best Local Similarity 37.9%; Pred. No. 3.4e-34;
Matches 89; Conservative 39; Mismatches 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-09-978-192A-69
US-09-978-192A-69
Septimence 69, Application US/09978192A
Patent No. US20020177553A1
GENERAL INFORMATION:
                               APPLICATION NUMBER: 60/084366
                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/084639
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/084640
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/084598 FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-5-07
APPLICATION NUMBER: 60/084627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/084643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/085339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/085338 FILING DATE: 1998-05-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/085323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/085582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/085700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-05-15
APPLICATION NUMBER: 60/085689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/085579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/085580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/085573
FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/085697
                                                                                                 APPLICATION NUMBER: 60/084414
                                                                                                                                                                   APPLICATION NUMBER: 60/084441
                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/084637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/085704
1998-04-30
                                                                  FILING DATE: 1998-05-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .998-05-15
                                                                                                                                1998-05-06
                                                                                                                                                                                                      FILING DATE: 1998-05-06
                                                                                                                                                                                                                                                                    FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE:
                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                    PRIOR 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

APPLICANT: Ashkenazi, Avi APPLICANT: Baker Kevin P.

```
R FILING DATE: 1998-03-27
R APPLICATION NUMBER: 60/079920
R APPLICATION NUMBER: 60/079923
R FILING DATE: 1998-03-30
R FILING DATE: 1998-03-31
R PILING DATE: 1998-03-31
R PRILIGATION NUMBER: 60/080105
R PRILIG DATE: 1998-03-31
R APPLICATION NUMBER: 60/080167
R FILING DATE: 1998-03-31
R FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R FILING DATE: 1998-04-15

R FILING DATE: 1998-04-15

R FILING DATE: 1998-04-15

R APPLICATION NUMBER: 60/08138

R FILING DATE: 1998-04-25

R APPLICATION NUMBER: 60/082568

R FILING DATE: 1998-04-21

R FILING DATE: 1998-04-21

R FILING DATE: 1998-04-22

R APPLICATION NUMBER: 60/082604

R FILING DATE: 1998-04-22

R APPLICATION NUMBER: 60/08204

R FILING DATE: 1998-04-22

R APPLICATION NUMBER: 60/082706

R FILING DATE: 1998-04-22

R FILING DATE: 1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PILLING DATE: 1998-04-08
APPLICATION NUMBER: 60/081195
FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081203
FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081229
                                                                                                                                                                                                         APPLICATION NUMBER: 60/080194
FILING DATE: 1998-03-31
APPLICATION NUMBER: 60/080327
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080328
FILING DATE: 1998-04-01
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/080333
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080334
FILING DATE: 1998-04-01
                                                                                                                                                                                                                                                                                                                                                                                                               TLING DATE: 1998-04-08
APPLICATION NUMBER: 60/081049
SILING DATE: 1998-04-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-23
APPLICATION NUMBER: 60/083336
FILING DATE: 1998-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/083322
FILING DATE: 1998-04-28
APPLICATION NUMBER: 60/083392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083495
FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/083545
FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081955
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLICATION NUMBER: 60/081819
ILING DATE: 1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICATION NUMBER: 60/083496
ILLING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/083499
FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/083554 FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPPLICATION NUMBER: 60/081071
   PPRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                VPDLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic ITILE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/978,192A CURRENT FILING DATE: 2001-10-15 PRIOR APPLICATION NUMBER: 09/918585 PRIOR FILING DATE: 2001-07-30 PRIOR APPLICATION NUMBER: 60/062250
                                                                                         Fong, Sherman
Gao, Wel-Qiang
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FLING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR PRILING DATE: 1997-11-12
PRIOR PRILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/065364
PRIOR APPLICATION NUMBER: 60/065364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R FILING DATE: 1998-03-11

R APPLICATION NUMBER: 60/07791

R PILING DATE: 1998-03-12

R PILING DATE: 1998-03-12

R FILING DATE: 1998-03-13

R FILING DATE: 1998-03-13

R FILING DATE: 1998-03-13

R FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R FILING DATE: 1998-03-20
R APPLICATION NUMBER: 60/078910
R FILING DATE: 1998-03-20
R PILING DATE: 1998-03-20
R FILING DATE: 1998-03-20
R APPLICATION NUMBER: 60/079294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIOR FILING DATE: 1998-03-10
RIOR APPLICATION NUMBER: 60/077632
RIOR APPLICATION NUMBER: 60/077641
RIOR FILING DATE: 1998-03-11
RIOR FILING DATE: 1998-03-11
RIOR APPLICATION NUMBER: 60/077649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LICATION NUMBER: 60/079689
ING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079664
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/079663
                                                                                                                                                                                                                                                                                                                        Pan, James;
Paoni, Nicholas F.
Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                   Tumas, Daniel
Williams, P. Mickey
Wood, William I.
                                                        Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                               Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                     APPLICANT
                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                            APPLICANT
```

998-04-1

```
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALP 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 SGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG--GSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    276 SLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSEENFP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASSCOGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 36.4%; Score 455.5; DB 9;
Best Local Similarity 37.9%; Pred. No. 3.4e-34;
Matches 89; Conservative 39; Mismatches 96;
                 RETLING DATE: 1998-04-29

RAPPLICATION NUMBER: 60/08359

R PILING DATE: 1998-04-29

R RPLICATION NUMBER: 60/08350

R FILING DATE: 1998-04-29

R RILING DATE: 1998-04-30

R RILING DATE: 1998-04-30

R RELING DATE: 1998-04-30

R RELING DATE: 1998-05-05

R RELING DATE: 1998-05-05

R RELING DATE: 1998-05-06

R RELING DATE: 1998-05-06

R RELING DATE: 1998-05-06

R RELING DATE: 1998-05-07

R RELING DATE: 1998-05-13

R RELING DATE: 1998-05-15

R RELING DATE:
APPLICATION NUMBER: 60/083558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

Search completed: December 20, 2002, 15:21:08 Job time : 8.30435 secs

```
153 LTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
US-09-644-600-6
Sequence 6, Application US/09644600
Patent No. 6451500
GENERAL INFORMATION:
APPLICANT: O'Brien, Timothy J.
APPLICANT: Tanimoto, Hirotoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213 DSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Sim
Matches 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-027-337-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 231
397
397
397
397
397
397
397
395
53
395
                                                                                                                                                                                                                                                                                                                                                                                          390.5
389.5
389.5
389.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEO ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Appli
                                                                                                                                                                                                                                    (without alignments)
519.349 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000000000
                                                                                                                                                                                                     December 20, 2002, 15:14:53 ; Search time 13.087 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sedinence e sedinence sedinence e sedinence sedinenc
                                                                                                                                                                                                                                                                                                                                                                                             ......GDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/1/laa/6A_COMB.pep:*
/cgn2_6/ptodata/1/laa/6B_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/laa/backfiles1.pep:*
                         GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_6/ptodata/1/1aa/5A_COMB.pep:*/cgn2_6/ptodata/1/1aa/5B_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -09-106-468-10
-09-106-468-10
-09-106-467-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-944-483-62
US-08-57-146-13
US-08-278-091-10
US-08-472-173-10
US-08-472-173-10
US-08-472-173-10
US-08-487-167-10
US-08-487-167-10
US-08-615-271-10
US-08-615-271-10
US-09-074-660-10
US-09-074-660-10
US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-386-642-12
US-08-944-483-59
US-08-944-483-57
US-09-518-046-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                               protein search, using sw model
                                                                                                                                                                                                                                                                                                                                 US-09-856-319B-2_COPY_1_231
                                                                                                                                                                                                                                                                                                                                                          1221
1 MLLLSLTLSLVLLGSSWGCG...
                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          621.5
621.5
616.5
609
609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
607.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB :
Maximum DB :
                                                                                                                                               OM protein
                                                                                                                                                                                                                                                                                                                                                                                             Seguence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
222
223
224
234
244
254
254
254
254
254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
```

Appli Appli

1, , 66,

US-08-944-483-66

Appli

```
GENERAL INFORMATION:

APPLICANT: O'Brien, Timothy J.

APPLICANT: O'Brien, Timothy J.

APPLICANT: Tanimoto, Hirotoshi
TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease Overexpressed in
TITLE OF INVENTION: Breast and Ovarian Carcinomas
FILE REFERENCE: D6064
CURRENT APPLICATION NUMBER: US/09/027,337B
CURRENT FILING DATE: 1998-02-20
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
OTHER INFORMATION: Serine protease catalytic domain of chymotrypsin (Chymb)
OTHER INFORMATION: homologous to similar domain in TADG-15
US-09-027-337-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ï
Patent No. 5200340
Sequence 54, Appl
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 1, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDR 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50.9%; Score 621.5; DB 2; Length 56.8%; Pred. No. 5e-53; ive 31; Mismatches ·54; Indels
5200340-6
US-08-469-486-54
US-08-469-688-54
US-09-131-995-1
US-09-132-154-1
US-07-832-087B-1
US-09-184-608-29
US-09-086-514-1
5200340-8
US-08-200-900A-2
PCT-US94-00616-2
                                                                                                                                                                                                           US-08-944-483-58
US-09-386-642-11
US-08-248-629A-1
US-08-451-932-1
US-08-452-260-1
US-08-326-785-1
                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6. Application US/09027337B Patent No. 5972616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
   546
790
790
790
791
791
791
791
798
798
810
815
815
815
```

```
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                US-08-944-483-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-08-557-146-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: RUSSELL, JOHN C.
APPLICANT: STEWART, KENT D.
APPLICANT: STROUPE, STEVEN D.
TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
TITLE OF INVENTION: AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
TITLE OF INVENTION: OF THE PROSTATE
                                                                                                                                                                                                                                                                                                                                                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 LTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93 SSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEG 152
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                               33 RIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDR 92
TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease TITLE OF INVENTION: Overexpressed in Carcinomas FILE REPERENCE: D6064CIP/D CURRENT APPLICATION WIDDER: US/09/644,600 CURRENT FILING DATE: 2000-08-23 PRIOR APPLICATION NUMBER: 09/421,213 PRIOR FILING DATE: 1999-10-20 PRIOR FILING DATE: 1999-10-20 PRIOR FILING DATE: 1998-02-20 NUMBER OF SEQ ID NOS: 98
                                                                                                                                                                                                                                                                                                                                                                                        54; Indels
                                                                                                                                                                                                                                                                                                                                                50.9%; Score 621.5; DB 4; 56.8%; Pred. No. 5e-53; tive 31; Mismatches 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: DOS
SOFTWARE: FastSRO for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 62, Application US/08944483 Patent No. 6232456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COLPITTS, TRACEY L. FRIEDMAN, PAULA N. GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                           ; CTHER INFORMATION: Chymotrypsin US-09-644-600-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 DSGGPLVCQKDGAWTLVGI 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213 DSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: DISRECT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COHEN, MAURICE
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 56.89
Matches 113; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 60064-3500
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: COHEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
STREET: 10
                                                                                                                                                                                          SEQ ID NO 6
LENGTH: 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                     YPE: PRT
                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 154 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Egelrud, Torbjorn
APPLICANT: Egelrud, Lennart
APPLICANT: Hansson, Lennart
TITLE OF INVENTION: Recombinant Stratum Corneum Chymotryptic
TITLE OF INVENTION: Enzyme (SCCE)
NUMBER OF SEQUENCES: 17
CORRESPONDENCE S. 17
ADDRESSEE: White & Case, Patent Department
                                                                                                                                                                                                                                                                                                                                                                                            Length 230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                          Query Match 50.5%; Score 616.5; DB 4; Best Local Similarity 56.6%; Pred. No. 1.5e-52; Matches 112; Conservative 31; Mismatches 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Sterner, Richard J.
REGISTRATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 1103326-181
TELECOMUNICATION INFORMATION:
TELECHONE: (212) 819-8783
TELEFERAX: (212) 8354-8113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     линея: US/08/557,146
14-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 13, Application US/08557146 Patent No. 5834290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
                                                                  REFERENCE/DOCKET NUMBER: 61
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: No. 6232456e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGGPLVCQKDGAWTLVGI 197
                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 230 amino acids
                                                                                                                                       TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
```

N. C.

```
; MOLECULE TYPE: polypeptide US-09-154-344-13
                                                                                                                                                                                                                                                                                        음
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                        ò
                                                                                                                                                    Dp
                                                                                                                                                                                         õ
                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                       5;
                                                                                                                                                                                                                                                                                                                                                      94 SNAEPLQVLSVSRAITHPSWNSTTMNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153 | 1: | :| | :| | | | | | | | | |
                                                                                                                                                                                                                                                                                                              34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Lennart
Recombinant Stratum Corneum Chymotryptic
Enzyme (SCCE)
: 17
                                                                                                                                                    Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO) CURRENT APPLICATION DATA:
APPLICATICN NUMBER: US/09/154,344
FILING DATE: 16-SEP-1998
                                                                                                                                                      ; DB 2;
8.2e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: White & Case, Patent Department STREET: 1155 Avenue of the Americas CITY: New York
                                                                                                                                                  h 49.9%; Score 609; DB Similarity '57.1%; Pred. No. 8.2e 13; Conservative 30; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/557,146
FILING DATE: 14-DEC-1995
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 13, Application US/09154344
Patent No. 5981256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: EGELTUG, Torbjorn
APPLICANT: Hansson, Lennart
TITLE OF INVENTION: Recombinant
TITLE OF INVENTION: Enzyme (SC
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Sterner, Richard J.
REGISTRATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (212) 819-8783
TELEFAX: (212) 354-8113
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 229 amino acids
INFORMATION FOR SEQ ID NO: 13:
                              LENGTH: 229 amino acids
TYPE: amino acids
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                              SGGPLVCQKDGAWTLVGI 196
                                                                                                                                                                                                                                                                                                                                                                                                                             SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acids
STRANDEDNESS: single
                 SEQUENCE CHARACTERISTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: New York COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RY: U.S.A.
10036-2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                  Query Match
Best Local Simi
Matches 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-154-344-13
                                                                                                                 US-08-557-146-13
                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                             214
                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                          ò
```

```
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                        94 SNAEPLOVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                               Gaps
                                                                             34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                        154 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD
                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ښ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with TITLE OF INVENTION: Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 228;
  Length 229;
                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/278,091
FILING DATE: 21-JUL-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Score 607.5; DB 1;
; Pred. No. 1.1e-51;
36; Mismatches 49;
  Score 609; DB 2;
Pred. No. 8.2e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Sim & McBurney
Suite 701, 330 University Avenue
                                        30; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Application US/08278091
Patent No. 5506139
GENERAL INFORMATION:
APPLICANT: LOCSMONE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, MAPLICANT: CHONG, MAPLICANT: CHONG, MAPLICANT: CHONG, Michel H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPANNE: (416) 595-1155
TELEPAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
49.9%;
ilarity 57.1%;
Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 55.6%;
                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                   214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RY: Canada
M5G 1R7
  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: Ontario
COUNTRY: Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: Suite
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-278-091-10
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-278-091-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 110;
                                        Matches 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
US-08-472-173-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                            214
                                                                                       154
                                                                                                                                                                                              178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                     g
                                                                                                                                                            ŏ
                                                  g
                                                                                       ŏ
                                                                                                                                                                                              g
                                                                        60 SSSEKIOKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDFAAGT 119
                                                      94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                           154 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 607.5; DB
Pred. No. 1.1e-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRICE APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,859
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/08483859
Watent No. 5656436
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                             LOOSMORE, Sheena M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                YANG, Yan-Ping
CHONG, Pele
OOMEN, Raymond P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEO ID NO: 10
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: OOMEN, Raymond P
APPLICANT: KLEIN, Michel H.
                                                                                                                                                                                                                    178 SGGPLVCKKNGAWTLVGI 195
                                                                                                                                                                                                  214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 55.64
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: Ontario
COUNTRY: Canada
21P: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
US-08-483-859-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                      US-08-483-859-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                       g
                                                                                                                         ò
                                                                                                                                                            d
                                                                                                                                                                                                  ò
                                                      ò
```

```
3,
94 SNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                            60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDFAAGT 119
                                                                                                                        94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/472,173
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 49.8%; Score 607.5; DB 1
Best Local Similarity 55.6%; Pred. No. 1.1e-51;
Matches 110; Conservative 36; Mismatches 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Analog of Haemophilus Hin-
TITLE OF INVENTION: Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                   Sequence 10, Application US/08472173 Patent No. 5665353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Stewart, Michael I. REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: CHONG, Pele
APPLICANT: OOMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
                                                                                                                                                                                               SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: Suite 70
CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
```

```
Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 07 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M5G 1R7
                                                                                                                                                                  RESULT 10
US-08-482-816-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154
                                                g
                                                                                  ò
                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       욥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٠<u>.</u>
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                     SNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGSSCQGD
                                                                                                                                                                                                                                                                                                                                                                   of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,167
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
RIOR APPLICATION: 735
                                                                                                                                                                                                                                                                              APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OONEN, Raymond P.
APPLICANT: OONEN, Raymond P.
APPLICANT: NICHEL H.
TITLE OF INVENTION: Analog of Haemophilus Hin47
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 49.8%; Score 607.5; DB 2; Best Local Similarity 55.6%; Pred. No. 1.1e-51; Matches 110; Conservative 36; Mismatches 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-508 MIS:vg
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,1149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-UUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                Sequence 10, Application US/08487167
Patent No. 5869302
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                   SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                 RESULT 9
US-08-487-167-10
                                                                                                                                               178
                                                                                                                214
                                                154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       යි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                à
                                                                               g
                                                                                                                ò
                                                                                                                                          g
```

```
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
APPLICANT: Yan-Ping
APPLICANT: Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: COMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with Reduced Protease A
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .,
.,
120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1038-494 MIS:vg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49.8%; Score 607.5;
55.6%; Pred. No. 1.1e
tive 36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRICE APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AGG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ....DER: US/08/482,816
07-JUN-1995
NN: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PATENTIN Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                 Sequence 10, Application US/08482816
Patent No. 5935573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                    178 SGGPLVCKKNGAWTLVGI 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,9
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                             214 SGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 110; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
US-08-482-816-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
```

```
Sequence 10, Application US/08801499 Patent No. 5962430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                              Ontario
: Canada
                                                          GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE
                                                                                                                                                                                                                                                                                          STATE: Or COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-801-499-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 SSSEKIQKLKIARVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDGG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with TITLE OF INVENTION: Reduced Protease Activity NUMBER OF SQUENCES: 23 CORRESPONDENCE ADDRESS: ADDRESSEE: Sim & MCBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PARENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                             E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 49.8%; Score 607.5; Best Local Similarity 55.6%; Pred. No. 1.1e Matches 110; Conservative 36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1038-390
                                                                                                                                                                 Sequence 10, Application US/08296149
Patent No. 5939297
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INPORMATION:
NAME: Stewart, Michael I
REGISTRATION UNDRER: 24,913
REFERENCE/POCKET UNDRER: 1038
TELECOMMUNICATION INPORMATION:
TELEPAN: (416) 595-1155
TELEPAN: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
                                                                                                                                                                                                                                                   APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OOMEN, RAYMOND P.
APPLICANT: KLEIN, MICHEL H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 SGGPLVCQKGNTWVLIGI 231
                                                          178 SGGPLVCKKNGAWTLVGI 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: SULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Ontario
COUNTRY: Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                   RESULT 11
US-08-296-149-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-296-149-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
셤
                                      ŏ
                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

RESULT 12

```
APPLICANT: LOOSMORE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: OMEN, Raymond P.
APPLICANT: COMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with Reduced Protease A
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94 SNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 IVNGENAVLGSWPWOVSLODSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/801,499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 49.8%; Score 607.5; DB 2; Best Local Similarity 55.6%; Pred. No. 1.1e-51; Matches 110; Conservative 36; Mismatches 49;
                                                                                                                                                                                                            ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1038-671 MIS: jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/482,816
FILING DATE: 07-UUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 08/296,149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/278,091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,
FILING DATE: 21-UUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-
TELEPHONE: (416) 595-1155
TELEPHONE: (416) 595-1155
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 07-JUN-1
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                       CORRESPONDENCE ADDRESS
```

Ą

```
TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120 TCVTTGWG-LTRXAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: KLEIN, Michel H.

TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49.8%; Score 607.5; DB 3; Length 228; 55.6%; Pred. No. 1.1e-51; tive 36; Mismatches 49; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-731 MIS: jb
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/487,167
FILING DATE: 07-010N-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: CALCALLED ATTORNEY/AGENT AND ATTO
                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/09074659
Patent No. 6025342
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 228 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                STATE: Ontario
COUNTRY: Canada
2IP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 110; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-074-659-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94 SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTECL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDGG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                   APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pela
APPLICANT: CHONG, Pela
APPLICANT: CHONG, Pela
APPLICANT: RIEIN, Michel H.
AITLE OF INVENTION: ANALOG OF HAEMOPHILUS HIN47 WITH REDUCED
TITLE OF INVENTION: PROTEASE ACTIVITY
NUMBER OF SEQUENCES: 23
CORRESPONDENCES. 21
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Toronto
STATE: Ontario
CONTRY: Canada
ZIP: M5G 1R/
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/615,271
FILING DATE: 20-JUN-1996
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49.8%; Score 607.5; DB 2; 55.6%; Pred. No. 1.1e-51; tive 36; Mismatches 49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/09074660
Patent No. 6020183
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OOMEN, Raymond P.
                                         Sequence 10, Application US/08615271 Patent No. 5981503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 107
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : 228 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 55.69
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                       ADDALL
STREET: bl.,
TTY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-615-271-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
```

., M

```
3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34 IVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRS 93
APPLICANT: OOMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCBURNEY
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER: Eloppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILLOW DATA: DATA:
COUNTRY: DATA: US/09/074,659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 49.8%; Score 607.5; DB 3; Length 228; Best Local Similarity 55.6%; Pred. No. 1.1e-51; Matches 110; Conservative 36; Mismatches 49; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 07-JUN-1955
PRIOR APPLICATION NUMBER: US 08/296,149
FRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 26-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I.
REGISTATION NUMBER: 24,973
REGISTATION NUMBER: 24,973
REGISTATION NUMBER: 24,973
REGISTATION NUMBER: 24,973
REGISTATION NUMBER: 1038-730 MIS:jb
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 SGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178 SGGPLVCKKNGAWTLVGI 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
US-09-074-659-10
                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
```

Search completed: December 20, 2002, 15:20:36 Job time : 14.087 secs

```
Bjoernslett M.;
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse),
bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mitsui S., Yamaguchi N.;
"Molscular cloning of mouse chymopasin.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-WAR-2001 (TrEMBLrel. 16, Created)
01-WAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEROPS; 'S01.256; -...
MGD: MGI:88558; Ctrl.
InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001314; Ser_protease_Try.
Pfam. PF00089; trypsin. 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SMO0203; Tryp_SPC. 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_I.
PROSITE; PS00135; TRYPSIN_HS; UNKNOWN_I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [2]
SEQUENCE FROM N.A.
STRAIN-129S6/SVEVTAC; IISSUE-SPLEEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chymopasin (Chymotrypsin A CTRA-1).
CTRL OR CTRA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AB016228; BAB20275.1; -. EMBL; AF236365; AAL11034.1; -. HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hydrolase; Serine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9ER05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9ER05
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
Q9ER05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O9pwq6 gadus morhu
O9G628 mus musculu
O9G719 mus musculu
O9C952 mus musculu
O9C9777 gadus morhu
O95kw7 bos taurus
O947q1 parallichthy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ogegze rattus norv
Ogw7q4 paralichthy
Ogw7q3 paralichthy
Ogedse mus musculu
Oger35 mus musculu
Ogetse mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9er05 mus musculu
Q9d7p8 mus musculu
Q9d960 mus musculu
                                                                          December 20, 2002, 15:14:08; Search time 28.6087 Seconds (without alignments) 1663.721 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                              1252
1 IVNGENAVPGSWPWQVSLQD......AMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                             671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                US-09-856-319B-4_COPY_34_264
                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9CQ52
Q92077
Q95KW7
Q9W7Q1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09E028
09W704
09W703
09DC86
09CR35
09DBX8
09PW06
09DC82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9ER05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            096060
                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                       sp_fungi:*
sp_human:*
sp_invertebrate:*
sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_vertebrate: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                            sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_rodent:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sp_rvirus:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_virus:*
                                                                                                                                                                                                                                                                                                                                                                                SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1242
1199
841.5
749.5
727.5
719.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
712.5
713.6
749.5
749.5
                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                Database :
                                                                                                                                                                                                                              Searched:
                                                                                                                                                               Sequence:
                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
```

Q91674 xenopus lae Q9WVP9 paralichthy Q9Bk47 luidia foli Q15146 home saplen Q9W7Q0 paralichthy Q9W7Q0 paralichthy Q9W7Q1 paralichthy Q9W7Q1 paralichthy Q9W7Q2 paralichthy Q9W7Q2 paralichthy Q9W7Q2 paralichthy Q9G498 scolopendra Q96G99 scolopendra Q96G99 scolopendra Q96G99 scolopendra Q9G495 home musculu Q9G495 home musculu Q9G1039 gadus morhu Q8C00 papto hamad Q9C00 rattus norv Q91039 gadus morhu Q8C00 mus musculu Q8C00 mus musculu Q8C00 mus musculu Q9C00 mus musculu Q0C00 musculu Q0C00 mus musculu Q0C00 musc	6 para 6 para 9 mus 7 mus macro
091674 09W7P9 09BK47 01S146 091W15 09W7Q0 09W7Q0 096018 0190218 0960899 0960899 0960899 0960899 0960899 0960899 0960899 0960899 091039 091039 091039 091039 091039	Q9W7Q6 Q9Z1R9 Q9R0T7 O18783
11111111111111111111111111111111111111	111111
1524 2600 2600 2600 2000 2000 2000 2000 20	238 246 246 806
	34.7 34.7 34.7 34.7
488 487 488 4887 4888 4887 4888 4888 48	435 435 434 432.5
7 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	4444 10640

ALIGNMENTS

264 AA

PRT;

PRELIMINARY;

```
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               096060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     096060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
          XW
SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HID DATE OF THE PROPERTY OF TH
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN-C57BL/6J; TISSUE-TONGUE;

MEDLINE-21085660; PubMed=11217851;

Rawai J., Shinaqawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Asito T., Okazaki Y., Gojobori T., Bono H., Rasukawa T., Salto R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Schrim L.M., Staubli F., Suzuki R., Tomita M., Magner L., Washio T.,

Schrim L.M., Staubli F., Suzuki R., Tomita M., Ragner L., Washio T.,

Schrim L.M., Salubli E., Beltcher C., Fujita M., Gariboldi M.,

Brownstein M.J. Bult C., Fletcher C., Fujita M., Gariboldi M.,

Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Lyons P., Marchlonni L., Mashima J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Nordone P., Ring B., Ringwald K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Mynshaw-Bootis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                   154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                      121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                        SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                    94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                 Gaps
                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                     ;
                                                 100.0%; Score 1252; DB 11; Length 264; Llarity 100.0%; Pred. No. 9.7e-107; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
1D979709A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam: PF00089; trypsin; 1.
PRINTS: PR00722; CHYMOTRYPSIN.
SMART; SM00202; Tryp_SPC; 1.
PR0SITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGD; MGI:88558; Ctrl.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
     28135 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AK009019; BAB26029.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1810004D15Rik protein.
CTRL OR 1810004D15RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P00766; 4CHA.
     264 AA;
                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; S01
                                                                                                   231;
     SEQUENCE
                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09D7P8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9D7P8
                                                                                                        Matches
                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
09D7P8
       So
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                         à
```

```
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishli Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Szuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Joros P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Rinqwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Rohtsuki S.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Rohtsuki S.,
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 TCVTIGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                    94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                           Mus musculus (Mouse),
Sukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : - SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hayashizaki Y., "Functional annotation of a full-length mouse cDNA collection.",
                                                                                                                                                          ö
                                                                                          Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                          28167 MW; 1D979469A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                          Score 1248; DB 11;
Pred. No. 2.3e-106;
                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=C57BL/6J; TISSUE=PANCREAS;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00722; CHYMOTRYPSIN. SMART; SM00020; Tryp_SPc; 1.
                                                                                          99.78;
99.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AK007333; BAB24967.1;
HSSP; P00766; 4CHA.
      protease.
                                                                                       Query Match
Best Local Similarity 99.6
Matches 230; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1810004D15Rik protein.
CTRL OR 1810004D15RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:88558; Ctrl.
                              264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRYPSIN FAMILY
Hydrolase; Serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; S01.256;
```

```
Matches 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                               09W7Q4
09W7Q4;
                                                                                      214
                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
                                                                                                                         RESULT 5
                                        g
                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                  61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34 IVNGENAVPGSMPWQVSLQDNTGFHFCGGSLIAPNWVVTAAHCKVTPGRHFVILGEYDRS 93
                                                                                                                                     IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                        1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BJ databases.
S1; ALSO KNOWN AS
                                                                           DB 11; Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 264;
                                                                                                                                                                                                                                                               SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                          214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00089; trypsin; 1.
PRINTS: PR00722; CHYMOTRYPSIN.
SMART; SM00022; Tryp_SPC; 1.
PROSITE; PS00240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS01135; TRYPSIN_SER; 1.
Hydrolase; Serine profease.
SEQUENCE 264 AA; 28116 MW; F9ED5D210FD3500E CRC64;
                                                    28151 MW; 1D979719E07C16DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95.8%; Score 1199; DB 11; 92.6%; Pred. No. 6.9e-102; iive 16; Mismatches 1;
                                                                         Score 1242; DB 11
Pred. No. 8e-106;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Molecular cloning of rat chymopasin.";
Submitted (DEC-1998) to the EMBL/GenBank/DDBJ (-)- SIMILARIY: BELONGS TO PEPTIDASE FAMILY SI EMBL; RASESIN FAMILY.

EMBL: RAD020757; BAB20287.1; -.
HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-RAT PANCREAS;
Sogame Y., Mitsui S., Kataoka K., Kashima K.,
Yamaguchi N.;
TRYPSIN_DOM; 1.
mevestn HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                        Created)
   ;; PS50240; TRYPSIN_DOM; 1.
;; PS00134; TRYPSIN_HIS; UNKN;; PS00135; TRYPSIN_SER; 1.
ses; Serine protesse.
E 264 AA; 28151 MW; 1D97
                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                        09E028;
01-MAR-2001 (TrEMBLrel. 16, C1
01-MAR-2001 (TrEMBLrel. 16, L2
01-JUN-2002 (TrEMBLrel. 21, L2
Chymopasin.
Rattus norvegicus (Rat).
                                                                         99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 92.6
ses 214; Conservative
                                                                                                Matches 230; Conservative
                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS; S01.256;
                                        Hydrolase;
SEQUENCE
                PROSITE;
PROSITE;
                                                                           Query Match
                                                                                       Local
                                                                                                                                                                                                                                                                                                                                               09E0Z8
                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                                                                                                   09EQZ8
                                                                                                                        ð
                                                                                                                                                                   ò
                                                                                                                                                                                         g
                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
```

```
TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWG-ARITDAMICAGGSGASSCQG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32 IVNGETAVSGSWPWQVSLQDGRGFHFCGGSLISPYWVVTAAHCTVSPRNHRVILGEHDRQ 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paralichthys Olivaceus (Flounder).
Eukaryota: Metazoa: Chordata: Cranlata: Vertebrata; Euteleostomi;
Actinopterygli: Meopterygli: Teleostei: Euteleostei: Neoteleostei:
Acanthomorpha: Acanthopterygli: Percomorpha: Pleuronectiformes;
Pleuronectoidei: Paralichthyidae: Paralichthys.
                              TISSUE-PANCREAS;
Suzuki T., Srivastava A.S., Kurokawa T.;
Japanese flounder mRNA for chymotrypsinogen 1.";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL; AB029753; BAA82365.1; --
HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152 KCVTTGWGRTGQTS--SPRYLQQTSLPLLSPAQCKQYWGYNRITDAMICAGASGVSSCQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ښ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 13; Length 261;
                                                                                                          SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                   48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28184 MW; D7090A9D65395B7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1999 (TrEMBLrel. 12, Last sequence update) 01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67.2%; Score 841.5; DB 1
65.9%; Pred. No. 3.7e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001314; Chymotrypsin.
InterPro; IPR00124; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LHIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_LHIS; UNKNOWN_1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9W7Q3
ID Q9W7Q3
AC Q9W7Q3; PRELIMINARY;
DT 01-NOV-1999 (TrEMBLrel. 12, or ol-NOV-1999 (TrEMBLrel. 12, or ol-NOV-1999)
                                                                                                                                                                                                                                                                                                                                                 01-NOV-1999 (TrEMBLrel. 12, 01-NOV-1999 (TrEMBLrel. 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                               Chymotrypsinogen 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=8255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; S01.256;
```

;; 3

```
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9CR35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
 ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TSEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-21085660; Pubmed-11217851;

Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

Arakawa T., Izawa M., Nishi K., Kiyosawa H., Rondo S., Yamanaka I.,

Saito T., Okazaki Y., Golobori T., Bono H., Kasukawa T., Saito R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
                     Paralichthys olivaceus (Flounder).

Eukaryota: Metazoa: Chordata: Craniata: Vertebrata; Euteleostomi;
Actinopterygii: Meopterygii: Teleostei: Euteleostei: Neoteleostei:
Acanthomorpha: Acanthopterygii: Percomorpha: Pleuronectiformes;
Pleuronectoidei: Paralichthyidae: Paralichthys.
                                                                                                                             31 IVNGEEALPHSWPWQVSLQDYTGFHFCGGSLINENWVVTAAHCNVRTS-HRVILGEHDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150 KCVTSGWGLTRHNAPDTPALLQQAALPLLINDDCRRYWGNKISNIMICAGASGASSCMGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                        59.9%; Score 749.5; DB 13; Length 260; 57.6%; Pred. No. 9.8e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210 SGGPLVCQKAGAWTLVGIVSWGSGTCTPTMPGVYARVTELRAWMDQTIANN 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                   27793 MW; 9F583044E22F78C0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                  62;
                                                                                                                                                                                                            MEROFS; S01.152; -...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PR.NTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; TRYP_SRO; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LHIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_LER; 1.
Hydrolase; Serine protease.
SEQUENCE 260 AA; 27793 MW; 9F583044E22F;
                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                               35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                  Matches 133; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2200008D09Rik protein.
2200008D09RIK.
                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                   TISSUE=PANCREAS;
                                                                                NCBI_TaxID=8255
                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09DC86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
Q9DC86
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
```

```
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Fruruon M., Anon H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodiiguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Marshill A., Hosegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN=C5/BL/6J; TISSUE=STOMACH, SPLEEN, AND PANCREAS;
MEDLINE=21085660; PubMed=11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Evkunishi Y., Konno H., Adachi J., Fukuda S.,
Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL; AR003060; BBB22539.1; -.
HSSP; P00766; IGCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                   Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2620A27AFBA5D04D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 58.1%; Score 727.5; DB 11; Best Local Similarity 56.3%; Pred. No. 1e-58; Matches 130; Conservative 37; Mismatches 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS, PRO072; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_HIS; UNKNOWN_1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGD; MGI:1913723; 2200008D09R1k.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27821 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
2200008D09Rik protein.
2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; S01.152;
```

1;

```
Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90WG60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09PWQ6
        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OSEPTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ï
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Richi P., Lewis S., Matsuo Y., (Sissi C., King B., Kochiwa H.,
Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
Schrimi L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
Gustincich S., Hill D., Hefmann M., Hume D.A., Kamiya M., Lee N.H.,
Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
A. Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Suzuki H., Toyo-oka K., Wang K.H., Wettz C., Whittaker C., Wilming L.,
Winnshaw-Boxis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Sukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria: Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                            'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                         Nature 409:685-690(2001).
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 11; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               213 SGGPLVCQKDGVWTLAGIVSWGSGFCSTSTPAVYARVTALMPWVQEILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27822 MW; 28C4487AF1A26B27 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 57.9%; Score 725.5; DB 1
Best Local Similarity 56.3%; Pred. No. 1.6e-58;
Matches 130; Conservative 36; Mismatches 64
                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESE; 1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                  MEROPS, S01.152; -.
MGD; MGI:1913723; 2200008D09Rik.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                           EMBL; AK008927; BAB25971.1; -
EMBL; AK003079; BAB25253.1; -
EMBL; AK0077615; BAB25241.1; -
EMBL; AK007815; BAB25280.1; -
EMBL; AK008729; BAB25861.1; -
EMBL; AK00888; BAB25954.1; -
HSSP; P00766; 1GCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2002 (TrEMBLrel. 21,
220000BDO9R1K, protein.
                                                                                                                                                                                                                                                                                                                                                                                           trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263 AA;
                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00089;
                                                                                                                                                                                  Hayashizaki Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OC OC BELL DAY
    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
STRAIN-C57BL/63; TISSUE-PANCREAS;

KATAIN-C57BL/64; TISSUE K., KONDO H., KANDARA T., FARLOR S., Yamanaka I., Salto T., OKAZAH, Y., GOJODOTI T., BONDO H., KASUKAWA T., SALTO R., RAGOTA K., MATSUGA H.A., AShburner M., Batalov S., Casavant T., FIEISChmann W., Gasterland T., Gissi C., King B., Kochlwa H., Kachel P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brach G., Burnstein M.J., Bult C., Fletcher C., Fullita M., Gariboldi M., Anordone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Wanning L., Wanning-Land, Walle C., Whittaker C., Willming L., Wanning-Land, Walle C., Whittaker C., Willming L., Wanning-Land, Wanning-Land, Kawaji H., Kohtsuki S., Marshing L., Wanning-Land, Kawaji H., Kohtsuki S., Marshing L., Wanning-Land, Walle C., Wanning L., Kawaji H., Kohtsuki S., Kawaji H., Kohtsuki S., Kawaji H., Kohtsuki S., Kawaji H., Kohtsuki S., Kamaning L., Kawaji H., Kohtsuki S., Kawaning M., Kawaji H., Kohtsuki S., Kawaning M., Kamaning L., Kawaji H., Kohtsuki S., Kawaning M., Kawai M., Kamaning M., Kawaning M., Kawaji H., Kohtsuki S., Kawai M., Kamaning M., Kamaning M., Kawai M., Kawaji H., Kanning M., Kamaning M., Kamaning M., Kawai M., Kawaji H., Kohtsuki S., Kawai M., Kamaning M., Kamaning M., Kamaning M., Kawai M., Kawai M., Kamaning M., Kawai M., Kaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TAYPSIN FAMILY.
EMBL; AK007566; BAB25112.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Score 719.5; DB 11; Length 263;
; Pred. No. 5.5e-58;
36; Mismatches 65; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      213 SGGPLVCQKDGVWTLAGIVSWGSGFCSTSTPAVYARVTALMPWVQEILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; TYPPSC7; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESER; 1.
Hydrolase; Serine protease; Serine protease; Serine 27898 MW; C0638FBBF905A92F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9PWQ6;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Chymotrypsin B precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEROPS; SOL.152; -. MEROPS; SOL.192723; 2200008D09R1k.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gadus morhua (Atlantic cod)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 55.8
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
```

ï

```
SEQUENCE
                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                           MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9D7T9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09D7T9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                89
                                                                                                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
  g
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                   5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUB-SPLEEN;
MEDLINE-21085660; Pubmed-11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
Atawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SERIOLITE SERVETHPRWDSRTINNDISLIKLASPAVLGTNVSPVCLGESSDVFAPG 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 -SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSG 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LTCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQYWGAR-ITDAMICAGGSGASS 176
                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         32 IVNGEEAVPHSWPWQVSLQQSNGFHFCGGSLINENWVVTAAHCNVRT-YHRVIVGEHDKS 90
                                                                                                                                                                                                                                                                                                                                                                                                           1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                              Microb. Comp. Genomics 5:41-50(2000).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209 CMGDSGGPLVCQKDNVWTLVGIVSWGSSRCSVTTPAVXARVTELRGWVDQILAAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                        56.9%; Score 712.5; DB 13; Length 263; 54.9%; Pred. No. 2.4e-57; ive 41; Mismatches 58; Indels 7;
                                                                                      Spilliaert R., Gudmundsdottir A.;
"Molecular Cloning of the Atlantic Cod Chymotrypsinogen B.";
                                                                                                                                                                                                                                                                                                                                263 AA; 28175 MW; EF61B18A34EE5E7C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                      CHYMOTRYPSIN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164 AA
                                                                                                                                                                                                   InterPro; IPR001254; Ser_protease_Try.
PRINTS; PR00722; CHWOTRYPSIN.
SMART; SW00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_ESR; 1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
Hydrolase; Serine protease; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                             SEQUENCE FROM N.A.
TISSUE-PYLORIC CAECA;
MEDLINE-20464334; PubMed-11011764;
                                                                                                                                                                                       InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_
                                                                                                                                                 EMBL; AJ242521; CAB43766.1;
HSSP; P00766; 1CHG.
MEROPS; S01.152; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 54.9
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0910001G08Rik protein.
CTRL OR 0910001G08RIK.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                       NCBI_TaxID-8049;
                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09DC82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9DC82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

```
STRAIN=CS5BL/6J; TISSUE-STOWACH;

KAWAI J., Shingaqwa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

KAWAI J., Shingaqwa A., Shibata K., Konno H., Adachi J., Fukuda S.,

Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

A Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Ruchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Lyons P., Marchionni L., Mashina J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Sordone P., Ring B., Ringaid M., Rodriguez I., Sakamoto N., Sazaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77 HPNWNA-NTMNNDLFLLKLASP-ARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVG 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWV 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17707 MW; 83791FD829ABEDD6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.8%; Score 674; DB 11; 82.2%; Pred. No. 4.5e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 4.5e-54;
5; Mismatches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LIGIUSWGTKNCNIQAPAMYTRVSKFSTWINOVMAYN 231 (||||||||||||||||||||| LIGIUSWGTKNCNIQAPAMYTRVSKFSTWINOVMAYN 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:88558; Ctrl.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00089; trypsin; 1.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 409:685-690(2001).
EMBL; AK003074; BAB22549.1; -.
HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 82.2
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. 2310074F01Rik protein. ELA3B OR 2310074F01RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S01
```

;; ;;

```
148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  092077
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8;
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ||:| | :||||:| | :||||| | ELLPNGAPCYISGWGRLSTNGPL-PDKLQQALLPVVDYEHCSRWNWWGLSVKTIMVCAGG 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DIQSGCNGDSGGPLNCPADNGTWQVHGVTSFVSSLGCNTLRKPTVFTRVSAFIDWIEETI 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-C57BL/6J; TISSUE-TONGUE;
MEDLINE-21085660; PubMed-11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRSSNAEPVQVLSI--ARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGASSCOGDSGCPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28 VVNGEEAVPHSWPWQVSLQYEKDGSFHHTCGGSLITPDWVLTAGHCISTSRTYQVVLGEH 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                           Nature 409:685-690(2001).
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                       "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11; Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28977 MW; 9F43F769DDB2A7CF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Job AA.

Jun-2001 (TrEMBLrel. 17, Created)
01-JUN-2002 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
ELA3B OR 2310074F01RIK.
Mus musculus (Mouse).
Mukaryota; Metazzzz.
Mummal'.
                                                                                                                                                                                                                                               MGD; MGI:1915118; Ela3b.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; Lrypsin; I.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SW00020; Tryp_SPC; I.
PROSITE; PS50240; TRYPSIN_LOM; I.
PROSITE; PS001134; TRYPSIN_LOM; I.
PROSITE; PS001135; TRYPSIN_LER; I.
Hydrolase; Serine protease.
                                                                                                                                                                               EMBL; AK008858; BAB25932.1; -. HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 44.0
Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID-10090;
                                                                 Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   229 AYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 267 ANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                   MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
Q9CQ52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RAPARA RA
ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            임
```

```
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A browstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,
Iyons P., Marchionni L., Mashima J., Mazarelli J., Mombaerts P.,
A Nordone P., Ring B., Ringwald M., Rodiiguez I., Sakamoto N.,
A Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
A Sato H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
A Wanshaw Booris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
A Hayashizaki Y.,
Bructional annotation of a full-length mouse cDNA collection.";
C. I- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207 DIQSGCNGDSGGPLNCPADNGTWQVHGVTSFVSSLGCNTLRRPTVFTRVSAFIDWIEETI 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGASSCOGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DRSSNAEPVQVLSI--ARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG. 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28 VVNGEEAVPHSWPWQVSLQYEKDGSFHHTGGGSLITPDWVLTAGHCISTSRTYQVVLGEH 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gadus morhua (Atlantic cod).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Elastase precursor (EZ 3.4.21.37) (Leukocyte elastase) (Lysosomal elastase) (Neutrophil elastase) (Bone marrow serine protease)
(MEDULLASIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11; Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40.9%; Score 511.5; DB 11; Lengum
44.0%; Pred. No. 6.3e-39;
""" """ """ """ Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hydrolase; Serine protease.
SEQUENCE 269 AA; 28904 MW; C543F76957B2A7CE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PERMY PRO0089; LYPESID: 1.
PRINTS: PRO0722; CHYMOTRYPSIN.
SMORT; SMO0020; TRYPSES: 1.
PROSITE; PSSO240; TRYPSIN_DOM; 1.
PROSITE; PSSO134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PSO0135; TRYPSIN_SER: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_fry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AK010149; BAB26734.1; -. EMBL; AK009129; BAB26092.1; -. HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGD; MGI:1915118; Ela3b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; S01.154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID-8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        267 ANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   092077
```

.; 8

.. &

269 AA; '29010 MW; 352E4202B04BBB2D CRC64;

Hydrolase; Serine protease.

SEQUENCE

FT

```
6
                 Gudmundsdottir E., Spilliaert R., Yang Q., Craik C.S., Bjarnason J.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58 D-RSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY--WGARITDAMICAGGSGA 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 VVGGEDVRVHSWPWQASLQYKSGNSFYHTCGGTLIAPQWVMTAAHC-IGSRTYRVLGKH 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seddi R., Guo X.-J., Chaix J.-C., Puigserver A.; "Nucleotide sequence of a bovine pancreatic proproteinase E cDNA."; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              175 -SSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCNI-QAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   206 LASCNGDSGGPLNCQNADGSWDVHGVVSFGSSMGCNYPKKPSVFTRVSAYIPWINNVW 263
                               Gudmundsdottir A.;
"Isolation and characterization of two cDNAs from Atlantic cod encoding two distinct psychrophilic elastases.";
comp. Biochem. Physiol. 113B:795-801(1996).
-!- CATALYTIC ACTIVITY: HYDROLYSIS OF PROTEINS, INCLUDING ELASTIN. PREFERENTIAL CLEAVAGE: VAL-1-XAA > ALA |-XAA.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2002 (TrEMBLrel. 20, Last annotation update)
Proproteinase E (Fragment).
Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Peccra; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Score 496; DB 13; Length 266;
; Pred. No. 1.6e-37;
48; Mismatches 77; Indels 12;
                                                                                                                                                                                                                                                                                                                                                                                ACTIVATION PEPTIDE (POTENTIAL). ELASTASE.
                                                                                                                                                                                                                                                                                                                                                                                                                         B786B52C71559E2E CRC64;
                                                                                                                                                                                                                InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRNTS; PR00020; trype_Try.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LIS; UNKNOWN_1.
PROSITE; PS00135; FRYPSIN_ER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                269 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL, AY05/840, AAL23697.1; -...
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin, 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
MEDLINE=96262679; PubMed=8925447;
                                                                                                                                                                                                                                                                                                                                                                                                                         28533 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        39.68;
                                                                                                                                                                    EMBL; U56956; AAB58350.1; -. HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                       266 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                       MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                       PROPEP
                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q95KW7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q95KW7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              095KW7
 OD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
```

```
172 SGASSCOGDSGGPLVCOKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINOVM 228
                                                                                                                                                                                                                                                                                                    207 DTRSGCNGDSGGPLNCPAADGSWQVHGVTSFVSAFGCNTIKKPTVFTRVSAFIDWIDETI 266
                                                                                                                                          58 DRS--SNAEPVQVLSIARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                           114 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
                                                                     57
                                                                                                     87
                                      Gaps
                                                                                         28 VVNGEDAVPYSWSWQVSLQYEKDGAFHHTCGGSLIAPDWVVTAGHCISTSRTYQVVLGEY
                                                                                                                                                                                                                                   1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                    13;
 Length 269;
                                    Indels
                                  88;
 DB 6;
39.5%; Score 494.5; DB 6 43.2%; Pred. No. 2.3e-37;
                                  37; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Search completed: December 20, 2002, 15:18:57 Job time : 29.6087 secs
                                  Matches 105; Conservative
                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                     229 AYN 231
                                                                                                                                                                                                                                                                                                                                                                                      267 ASN 269
   Query Match
                                                                                                       g
                                                                                                                                            ŏ
                                                                                                                                                                            g
                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                     ò
```

```
December 20, 2002, 15:12:13 ; Search time 35.6087 Seconds (without alignments) 864.421 Million cell updates/sec
                                                                                                                                                                                                                                                  ...GDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                908470
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                     908470 segs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                     US-09-856-319B-2_COPY_1_231
1221
1 MLILSLTLSLVLLGSSWGCG.....
                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                       Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                        Run on:
```

/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:* /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1996.DAT:* /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:* /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:* /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT: /SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1980.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1981.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1981.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1981.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1983.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1981.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1986.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1986.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1986.DAT:*
/SIDSZ/gcgdata/geneseq/geneseqp.embl/AA1986.DAT:* A_Geneseq_101002:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		æ				
Result		Query				
No.	Score	Match	Match Length DB	DB	ID	Description
-	1221	!	:	21	AAB11710	Human serios prote
	1093			15	11711AAA	Mongo cortoo proto
• (1			1 1	TT/TTOWN	שחמב שבד דווב הזחרים
~	979			77	AAB54077	Human pancreatic c
4	684.5			53	AAU82738	Amino acid sequenc
S	657.5			21	AAY99596	Bovine chymotrypsi
9	621.5			22	AAB98504	Human chymotrypsin
7	472			7	AAP61724	Porcine elastase I
œ	472	38.7	269	8	AAP70758	Pig pancreas elast
6	446.5			13	AAR29621	Porcine pancreatic
10	445			7	AAP60062	Sequence of human

Human pancreatic c Human pancreatic c Human pancreas ela Human pancreatic de sequenc Sequence of human Human pancreatic t Human acid sequenc Sequence of human Novel human Novel human Human acid sequenc Human pro382 (UNG) Human pro382 (UNG) Human pro382 (UNG) Human pro382 (UNG) Human membrane-typ Human membrane-typ Human associated Human casociated Human casociated Human acid sequenc Human serine prote Human serine prote Human serine prote Human acid sequenc	Rat caldecrin cont Plasminogen mutein Plasminogen mutein Plasminogen mutein Plasminogen mutein Plasminogen mutein
22 AAP61723 AAP51723 AAP51224 AAP70260 AAP70338 22 AAB6058 8 AAP60059 8 AAP60059 23 AAU97691 AAP600513	17 AAR90682 12 AAR12933 12 AAR12945 12 AAR12939 12 AAR12943 12 AAR12944
2009 10069 100699 20102 20102 20102 20202	268 811 811 811 811
644 644 644 644 644 644 644 644	407.5 403.5 401.5 401.5
11111111111111111111111111111111111111	4 4 4 4 4 4 0 4 2 2 2 2 2

ALIGNMENTS

```
The invention relates to novel serine process's designated bases?

The invention also relates to vectors and transformants comprising BSSP5 nucleic acids; transgenic animals in which the expression level of BSSP5 can be varied; and an mBSSP5 knockout mouse. The invention additionally encompasses anti-BSSP5 antibodies and methods of production of such antibodies, methods of BSSP5 detection using the antibodies, and the antibodies, methods of BSSP5 detection using the antibodies, and the antibodies, methods of BSSP5 detection using the antibodies, and the antibodies, methods of BSSP5 detection using the antibodies, and the medical conditions, e.g., pancreatitis; A method for detecting pancreatitis comprising measuring BSSP5 concentration in the blood or urine, and a pancreatitis diagnostic agent containing an anti-BSSP5 carine pancreatitis diagnostic agent containing an anti-BSSP5 carine proteases. The isolated in a human brain conserved regions of serine proteases. The BSSP5 serine proteases and nucleotides encoding them are useful in detecting homologues, mutants and polymorphic variants in biological samples (e.g., blood, urine, brain, prostate gland, placenta, testis, pancreatitis and prostatic hypertrophy. Sequence AAB11710 represents murine BSSP5 (hBSSP5), and sequence AAB11711 represents murine BSSP5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALF 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnostic marker; antibody; transgenic animal; Alzheimer's disease; epilepsy; cancer; inflammation; infertility; pancreatitis; prostatic hypertrophy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLISLTLSIVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                    invention relates to novel serine proteases designated BSSP5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 1221; DB 21; Length 264; 100.0%; Pred. No. 1.1e-98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BSSP5; serine protease; human; hBSSP5; mouse; mBSSP5; brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse serine protease BSSP5 (mBSSP5) SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                          Claim 1; Page 51-52; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB11711 standard; Protein; 264 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 231; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200031243-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB11711;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
The invention relates to novel serine proteases designated BSSP5

(AAB1710-B11711), and to nucleic acids encoding them (AAA67737-A61734).

The invention also relates to vectors and transformants comprising BSSP5 nucleic acids; transgenic animals in which the expression level of BSSP5 can be varied; and an mBSSP5 knockout mouse. The invention additionally encompasses anti-BSSP5 antibodies and methods of production of such antibodies, methods of BSSP5 detection using the antibodies, and the use of BSSP5 proteins or fragments as diagnostic markers for certain medical conditions, e.g., pancreatitis. A method for detecting medical conditions, e.g., pancreatitis Concentration in the blood or urine, and a pancreatitis diagnostic agent containing an anti-BSSP5 antibody is also disclosed. Nucleotides encoding BSSP5 were initially isolated in a human brain cDNA library using degenerate PCR primers (AAA61744, Ba1744, Ba1745, based on conserved regions of serine proteases. The BSSP5 serine proteases and nucleotides encoding them are useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 detecting homologues, mutants and polymorphic variants in biological samples (e.g., blood, urine, brain, prostate gland, placenta, testis, pancreas and spleen) as diagnostic markers for conditions such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alzheimer's disease, epilepsy, cancer, inflammation, infertility, pancreatitis and prostatic hypertrophy. Sequence AAB11710 represents human BSSP5 (hBSSP5), and sequence AAB11711 represents murine BSSP5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serine proteases BSSP5, useful in detecting homologs, mutants and polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human pancreatic cancer antigen protein sequence SEQ ID NO:529.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                         Yamaguchi N, Mitsui S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89.5%; Score 1093; DB 21;
85.7%; Pred. No. 1.6e-87;
11ve 21; Mismatches 12;
                                                                                                                                                                                                                                                                                                                              Claim 3; Page 55-56; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB54077 standard; Protein; 192
                                                                                                                         Kominami K,
99WO-JP06473.
                                      98JP-0347806.
                                                                               (FUSO ) FUSO PHARM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                              WPI; 2000-400058/34.
N-PSDB; AAA61734.
                                                                                                                       Uemura H, Okui A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 198; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264 AA;
19-NOV-1999;
                                        20-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB54077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB54077
                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XXAC
```

ö

```
AAC98773 to AAC99231 encode the human pancreatic cancer associated proteins, called pancreatic cancer antigens, given in AAB54008 to AAB5466. The human pancreatic cancer antigens have cytostatic, cancroprotective, nootropic, immunodulatory, relaxant, contraceptive, neuroprotective, nootropic, immunodulatory, relaxant, contraceptive, gynaecological, cardiant and antiinflammatory activities, and can be used for in gene therapy. The polynucleotide and proteins can be used for preventing, treating, or ameliorating a medical condition or in assays for diagnosing a pathological condition or a susceptibility to one in a cubject. Binding partners to the proteins and the activity of the conteins can be identified. The pancreatic cancer antigens can be used to detect, treat or prevent pancreatic disorders, especially cancer. CC appuists and antagonists to the antigens can be screened for. The Agonists and antagonists to the antigens can be used to design nucleic acid hybridisation probes that can be used in chromosome mapping, linkage and linguist, tissue identification and/or typing and a variety of forensic and diagnostic methods. The proteins can be used to generate antibodies which are used to purify, detect and therapeutic methods. The proteins can be used to generate antibodies or contract and therapeutic methods. The proteins can detapentic methods. The proteins can detapentic methods. The broteins can detapentic methods. The broteins can detapentic methods. The broteins can detapentic methods. The proteins can detapentic methods and in vivo and in vivo and in vivo and in vivo and therapeutic methods. The proteins can be used to generate antibodies contraction and therapeutic methods and antibodies methods. The proteins can be used to generate antibodies contract or contract antibodies contract and therapeutic methods. The proteins can be used to generate antibodies contract or contract a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins can be used to treat or prevent neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal or proliferative disorders. AAC99232 to AAC99240 and AAB54467 represent sequences used in the exemplification of the present invention.
Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; datacetis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analygais; itssue identification; itssue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 966; 1379pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-MAR-2000; 2000WO-US05989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-579444/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAC98842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200055320-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
```

```
ô
                                                                                                                                                                                                                                   65 ISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTL 124
                                                                                                                                                                                                                 LKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTV 184
                                                                                         Gaps
                                                                        5 SLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSL 64
                                        ö
 81.6%; Score 996; DB 21; Length 192; 99.5%; Pred. No. 3.3e-79; 1ve 0; Mismatches 1; Indels
Query Match
Best Local Similarity 99.5
Matches 189; Conservative
                                                                                                                                                                                                                 125
                                                                                                                                                                              61
```

g

ò

8

ò

ij

1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60

ô

```
The present invention relates to the isolation of novel human proteases, and the nucleic acids encoding them. The sequences of the invention are useful for treating diseases and disorders such as cancers (e.g. inflammatory diseases and asthma), immune-related diseases and disorders (e.g. inflammatory diseases and asthma), prain or neuronal-associated diseases, metabolic disorders (e.g. diseases, bessity), inflammatory diseases, e.g. rheumatorid arthritis and psoriasis), central or peripheral nervous system diseases, migraines, pain, sexual dysfunction, mood disorders (e.g. rheumin disorders, cognition disorders, hypotension, hypertension, psychotic disorders, neurological disorders, hypotension, e.g. Alzheimer's disease, Parkinson's disease) and dyskinesias.

(e.g. Alzheimer's disease, Parkinson's disease) and dyskinesias.
                                                                                                                                                                                                                                                                     Human; protease; cancer; immune-related disorder; cardiovascular disease; neuronal-associated disease; metabolic disorder; inflammatory disorder; nervous system disorder; sexual dysfunction; pain; mood disorder; hypertension; psychotic disorder; neurological disorder; dyskinesia; viral infection; human immunodeficiency virus; HIV; non-viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                infections caused by human immunodeficiency virus (HIV), and non-viral infections such as ocular disease (e.g. glaucoma) and macular degeneration. AAU82702-AAU82760 represent the novel human proteases of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treating diseases and disorders such as cancers, immune-related diseases and disorders, cardiovascular disease (e.g. restenosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acids encoding novel human proteases, useful for useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sudarsanam S, Manning G, Caenepeel S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amino acid sequence of novel human protease #37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.1%; Score 684.5;
55.0%; Pred. No. 8e-5
Live 36; Mismatches
                                                                                                                           AAU82738 standard; Protein; 263 AA.
                                                                                                                                                                                                                                                                                                                                                                ocular disease; cytostatic; enzyme.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Fig 2M; 313pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-JUN-2001; 2001WO-US20171.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-JUN-2000; 2000US-214047P.
                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inflammatory disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Whyte D,
                  181 NQCRQYWGSS 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-139913/18.
185 NQCRQYWDSS 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; ABK31780
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200200860-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Charydczak G;
                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Simi
                                                                                                                                                                                                 23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plowman G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                             AAU82738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                                        AAU82738
                                                                                                                                                             g
 ò
```

```
SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
              CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV
                              20-OCT-1999;
                                                                                                                                                                                                                                                                                                                                  03-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O'Brien TJ,
                                                                                                                                                                                                                                                                                                        AAB98504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                           Human;
                                                                                                                                                                                                                                                                                                                                                                                                        tumour
              13
                                                                   19
                                                                                             61
                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                          g
                                                                   ŏ
                                                                                             g
                                                                                                                          ŏ
                                                                                                                                                   g
                                                                                                                                                                              ò
                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is bovine chymotrypsinogen. It was included in a review of sequence homologies of several plasminogen activators. Plasminogen is the principal serine protease zymogen in the extracellular fluids of vertebrates. Its active form, plasmin, is implicated in pericellular proteolysis associated with a wide range of physiological and pathological processes. Plasminogen expression is regulated by plasminogen activators which hydrolyse a peptide bond in plasminogen to spontaneously convert it to plasmin or form tight binding complexes with plasminogen to spontaneously convert it to plasmin . The sequence homology analysis has identified a six amino acid peptide involved in plasminogen activation. This peptide is particularly useful when inserted between amino acid residues 644 and 645 of full length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plasminogen. Novel plasminogen activators have been made based upon the plasminogen activation/recognition site of plasminogen binding proteins. The polypeptides are useful in preparing thrombolytic agents for treating blood clotting disorders such as heart attack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polypeptide with plasminogen activator activity useful as thrombolytic agent for treating blood clot disorders e.g. heart attack, comprises 10 amino acid peptide fragment for recognition or activation of
                                                                                               120 DITLLKLATPARFSQTVSAVCLPSADDDFPAGTLCATTGWGKTKYNANKTPDKLQQAALP 179
                                         61 GGSLISEDWVVTAAHCGVRTS-DVVVAGEFDOGSDEENIOVLKIAKVFKNPKFSILTVVN 119
1 MASLWLLSCFSLVGAAFGCGVPAIHPVLSGLSRIVNGEDAVPGSWPWQVSLQDKTGFHFC
                           GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNN
                                                                                DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 245;
                                                                                                                                                     181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                               plasminogen activator; cardiant; thrombolytic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53.8%; Score 657.5; DB 21;
ilarity 54.9%; Pred. No. 1.7e-49;
Conservative 37; Mismatches 58;
                                                                                                                                                                                                                                                                                                                                                            heart attack; stroke; blood clotting disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 35-36; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (OKLA-) OKLAHOMA MEDICAL RES FOUND.
                                                                                                                                                                                                                                   AAY99596 standard; protein; 245 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US09991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhang XC, Tang JJN;
                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                    Bovine chymotrypsinogen A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-422975/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 117; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  WO200032759-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-DEC-1998;
                                                                                                                                                                                                                                                                                       13-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                             38-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     plasminogen
                                                                                                                                                                                                                                                                                                                                                                                        30s taurus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                             AAY99596;
                                                                                                                                                                                                                                                                                                                                               Bovine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lin X,
                                                                               121
                                                                                                                                                               180
                                                                                                                                                                                                                                                g
                                                                                                         qq
                                                                                                                                      ò
                           ò
                                                                               ò
```

```
ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to human tumour antigen-derived gene 15 (TADG-15) protein and coding sequence (see AAH23601 and AAB98500).
TADG-15 is an extracellular serine protease. It was found that TADG-15 is over-expressed in ovarian tumours. TADG-15 protein or its fragments of 9-20 residues that lack TADG-15 protease activity are useful for vaccinating an individual against TADG-15, having, suspected of having or at risk of getting cancer. Furthermore, the TADG-15 gene can be used as a diagnostic or therapeutic target in cancer. The present sequence was used in a sequence homology alignment with the catalytic domain of TADG-15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
139 PVCLASSNEALTEGLICVTIGWGRLSGVGNVTPAHLQQVALPLVIVNQCRQYWDSSITDS 198
                                                                                                                                                120 AVCLPSASDDFAAGTTCVTTGWGLTRYTNANTPDRLQQASLPLLSNTNCKKYWGTKIKDA 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33 RIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDR 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   termed tumor antigen-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15 protein overexpressed in carcinomas and DNA encoding it, for diagnosis, treatment, prevention of cancer, particularly breast,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22; Length 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TADG-15; cytostatic; vaccine; ovarian tumour; cancer; antigen-derived gene 15; serine protease; chymotrypsin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human chymotrypsin serine protease catalytic domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.9%; Score 621.5; DB 2
56.8%; Pred. No. 2.2e-46;
iive 31; Mismatches 54
                                                                                                                                                                                                                                             180 MICAGASGVSSCMGDSGGPLVCKKNGAWTLVGI 212
                                                                                                                                                                                                             231
                                                                                                                                                                                                                MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 10; Fig 1; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                              AAB98504 standard; Protein; 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0421213.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-OCT-2000; 2000WO-US29095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel extracellular serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-381031/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 113; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200129056-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ovarian cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
```

1;

Gaps

1;

Indels

```
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
                         AAP70758
                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
    152
                                                                                212
                                                                                                        FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N -- NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : ||: |||||| | :| || || || SKGNDIALLKLASPVYLTDKIQLGCLPAAGSILPNNYVCYVTGWGRLQTNG-ASPDILQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The porcine elastase product may be efficiently expressed from a transformed host such as collbacilius or yeast, yielding the product more efficiently than spleen extraction. See also J61192288.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH
SSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEG
                       LTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biological prepn. of pig elastase II - using DNA with base sequence coding for specified aminoacid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38.7%; Score 472; DB 7;
45.6%; Pred. No. 3e-33;
ilve 32; Mismatches 84
                                                                                                                                                                                                                                                                                                          AAP61724 standard; Protein; 269 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 1; 11pp; Japanese.
                                                                                                                                                           DSGGPLVCQKGNTWVLIGI 231
||||||||||||
|DSGGPLVCQKDGAWTLVGI 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85JP-0034050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85JP-0034050
                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 45.6'
Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (KIRI ) KIRIN BREWERY KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1986-262895/40.
N-PSDB; AAN60919.
                                                                                                                                                                                                                                                                                                                                                                                                                               Porcine elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Colibacillus; yeast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JP61192289-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                        23-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-AUG-1986.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sus scrofa.
                                                                                                                                                                                                                                                                                                                                                  AAP61724;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
63
                                                                              153
                                                                                                                                                                                                   180
                                                                                                                                                               213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117
                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                        AAP61724
                                                                                                                g
                                                                                                                                                             ò
                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                  NAME OF A PART O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
ô
                                    8
                                                                              ò
```

```
59 FCGGSLISOSWVVTAAHCNVSPGRHFVVLGEVDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence encoding pancreas elastase may be used to transform an expression system. The product is useful in rejuvenating the elasticity of the arterial wall, and improving unusual serum lipid levels and lipoprotein metabolism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 LLLSLTLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQKGN-TWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pancreas elastase prodn. used to improve lipoprotein metabolism comprises isolating RNA coding elastase, synthesising single and double chain cDNA and introducing recombinant into host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38.7%; Score 472; DB 8;
45.6%; Pred. No. 3e-33;
tive 32; Mismatches (
                                                                                                                                                                                                                                                                        /note= "May be absent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 480; 18pp; Japanese.
                                                                                                                                                                                                                                   Location/Qualifiers
  ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
AAP70758 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein; 253
                                                                                                                                                          metabolism; lipid.
                                                                                                                                                                                                                                                                                                                                                                                              85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                  85JP-0138494
                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-APR-1993 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 45.6
Matches 109; Conservative
                                                                                                                 Pig pancreas elastase-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1987-040875/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SANY ) SANKYO KK.
                                                                                                                                                                                                                                                     Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAN71121
                                                                                                                                                                                                                                                                                                                                                                                            25-JUN-1985;
                                                                                                                                                                                                                                                                                                              JP62000276-A
                                                                                                                                                                                                                                                                                                                                                                                                                                25-JUN-1985;
                                                                           9-APR-1991
                                                                                                                                                          Lipoprotein
                                                                                                                                                                                                                                                                                                                                                     06-JAN-1987
                                                                                                                                                                                               Sus scrofa.
                                      AAP70758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR29621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR29621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DXXXI
```

```
WPI; 1986-262894/40.
N-PSDB; AAN60706.
                                                                           Takiguchi Y,
Ohsumi J;
      23-OCT-1985;
05-APR-1985;
27-APR-1985;
26-JUL-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP61192288-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-AUG-1986.
                                         02-DEC-1985;
                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAP61723;
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                      AAP61723
ID AAP6
셤
                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                     132 QYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQ-- 189
                                                                                                                                                                                                                                                                                                                                                                                                        76 CNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRA--ITHPSWNSTTMN--NDVTLLKLASPA 131
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                   19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSGF--HFCGGSLISQSWVVTAAH 75
                       Pig; swine; bile acid; gall bladder; bile acid secretion promoters; liver function improvers; ss.
                                                                                                                                                                                                                            This sequence represents porcine pancreatic elastase III. It was expressed in E. coli YA21 using the expression vector pELE001. It may be used in bile acid secretion promoters and liver function
                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                      36.6%; Score 446.5; DB 13; Length 253; 43.5%; Pred. No. 4.8e-31; ive 33; Mismatches 78; Indels 15;
                                                                                                                                                                                 Pig pancreas elastase protein - used in bile acid secretion promoters and liver function improvers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence of human pancreatic elastase IIA encoded on pH2E2
                                                                                                                                                                                                                                                                                                                                                                                                                                           :| |:: :|:||| | | |||||||| : :| : |: WWGSTVKQTMVCAGGDIRSGCNGDSGGPLNCPAADGSWQVHGV 218
                                                                                                                                                                                                                                                                                                                                                                                                                                 190 YWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Enzyme; serum lipoprotein metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP60062 standard; Protein; 269 AA
        Porcine pancreatic elastase III.
                                                                                                                                                                                                            Claim 1; Page 8; 10pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86EP-0302557.
                                                                                                     91JP-0092069
                                                                                                                       91JP-0092069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                        97; Conservative
                                                                                                                                        (SANY ) SANKYO CO LTD.
                                                   Sus scrofa domestica
                                                                                                                                                         WPI; 1992-428826/52.
                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                       253 AA;
                                                                                                                                                                   N-PSDB; AAQ31724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-1986;
                                                                                                     23-APR-1991;
                                                                                                                       23-APR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                   JP04325090-A
                                                                                    13-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-OCT-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP198645-A.
                                                                                                                                                                                                                                                        improvers
                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP60062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 176
                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                οý
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLICVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                  The genetically engineered prod. can eliminate the dependency on human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                obtd.
                                                                                                                                                                   Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 36.4%; Score 445; DB 7; Length 269; Best Local Similarity 43.9%; Pred. No. 6.9e-31; Matches 105; Conservative 28; Mismatches 92; Indels
                                                                                                                                                                     Ohmine
                                                                                                                                                                                                                                                                                                New genetically engineered human pancreatic elastase
                                                                                                                                                                     Eurukawa H,
                                                                                                                                                                                                                                                                                                                     using hosts modified DNA coding for enzyme
                                                                                                                                                                     Kawashima I,
                                                                                                                                                                                                                                                                                                                                                           Example; Page 14-15; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAP61723 standard; Protein; 269
85JP-0236686.
85JP-0072308.
85JP-0091986.
85JP-0163964.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85JP-0034049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85JP-0034049
                                                                                  85JP-0271128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (KIRI ) KIRIN BREWERY KK
                                                                                                                                                                        Tani T,
                                                                                                                                                                                                                                WPI; 1986-280300/43.
N-PSDB; AAN60076.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Colibacillus; yeast
                                                                                                                            SANY ) SANKYO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human elastase II
```

ä

```
JP62000276-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JAN-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAP70760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
    \overset{\circ}{\mathbf{x}}\overset{\times}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}{\mathbf{x}}\overset{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; dagnosis; identification; cytostatic; neuroprotective; nocotropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; iissue identification; itssue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57 TCGGSLIANSWVLTAAHCISSSRTYRVGLGRHNLYVAESGSLAVSVSKIVVHKDWNSNQI 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                 The human elastase product may be efficiently expressed from a transformed host such as collbacilius or yeast, yielding the product more efficiently than spleen extraction.

See also J61192289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                       Biologically producing human elastase ii – using DNA chain with biological prodn. capability for human elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human pancreatic cancer antigen protein sequence SEQ ID NO:576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36.0%; Score 439.5; DB 7; Length 34.7%; Pred. No. 2.1e-30; 1ve 26; Mismatches 87; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQ 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB54124 standard; Protein; 269 AA
                                                                                                                                                                   Claim 1; Fig 1-2; 19pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0124270.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-MAR-2000; 2000WO-US05989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 44.79
Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-579444/54.
N-PSDB; AAC98889.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200055320-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB54124
X F F X 8 X C C C C X X 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
```

```
AAC98773 to AAC99231 encode the human pancreatic cancer associated proteins, called pancreatic cancer antigens, given in AAB54008 to AAB5466. The human pancreatic cancer antigens have cytostatic, caucher antigens have cytostatic, caucher antigens have cytostatic, caucher antigens have cytostatic, caucher and can be used for gynaecological, cardiant and antilnflammatory activities, and can be used for in gene therapy. The polynucleotide and proteins can be used for preventing, treating, or ameliorating a medical condition or in assays for diagnosing a pathological condition or a susceptibility to one in a subject. Binding partners to the proteins and the activity of the proteins can be identified. The pancreatic cancer antigens can be used to detect, treat or prevent pancreatic disorders, especially cancer.

Agonists and antagonists to the antigens can be used to design nucleic acid hybridisation probes that can be used in chromosome mapping, linkage analysis, tissue identification and/or typing and a variety of forensic and diagnostic methods. The proteins can be used to generate antibodies which are used to purify, detect and target the polypeptides, including both in vivo and in vitro diagnostic and therapeutic methods. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proteins can be used to treat or prevent neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal or proliferative disorders. AAC99232 to AAC99240 and AAB54467 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 TCGGSLIANSWVLTAAHCISSSRTYRVGLGRHNLYVAESGSLAVSVSKIVVHKDWNSNQI 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 MIXTLLLSTLVAG-ALSCGDPTYPP---YVTRVVGGEEARPNSWPWQVSLQYSSNGKWYH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35.0%; Score 427.5; DB 21; Length 269; 43.9%; Pred. No. 2.3e-29; ive 26; Mismatches 89; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQ 221
Claim 11; Page 1010-1011; 1379pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2..15
/note= "May be absent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAP70760 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lipoprotein metabolism; lipid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human pancreas elastase-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sest Local Similarity 43.9 Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
```

```
Liu C, I
Wang D,
Yang Y, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200066709-A2.
                                                                                                                                                                                                                               inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-NOV-2000
         Tang YT,
Zhao QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                 Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB36481;
                                                                                                                                                                                                                                                                                                   Query Match
                              Xue AJ,
                                                                                                                                                                                                                                                                                                             Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
AAB36481
          g
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                           α
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                                                                                                                                                                                  FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                           119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLICVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                              LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                                                                                                                                                                                                                                 1 MIRTLLLSTLVAG-ALSCGVSTYAPDMS---RMLGGEEARPNSWPWQVSLQYSSNGQWYH 56
                                                                                                                                                                                                                                                                                                                                                             177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                  Sequence encoding pancreas elastase may be used to transform an expression system. The product is useful in rejuvenating the elasticity of the arterial wall, and improving unusual serum lipid levels and lipoprotein metabolism.
                                                        Pancreas elastase prodn. used to improve lipoprotein metabolism -
comprises isolating RNA coding elastase, synthesising single and
double chain cDNA and introducing recombinant into host
                                                                                                                                                                                                           14;
                                                                                                                                                                                      35.0%; Score 427; DB 8; Length 269; 41.0%; Pred. No. 2.6e-29; Live 36; Mismatches 91; Indels
                                                                                               Disclosure; Page 482; 18pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                      AAM78338 standard; Protein; 1052 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human protein SEQ ID NO 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0560875
2000US-0598075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0654936
2000US-0663561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0693325
2000US-0728422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-FEB-2001; 2001WO-US04098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0496914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0620325
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                          98; Conservative
                            WPI; 1987-040875/06
                                                                                                                                                                                       Query Match
Best Local Similarity
         (SANY ) SANKYO KK.
                                                                                                                                                                    269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HYSE-) HYSEQ INC
                                      N-PSDB; AAN71123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200157190-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-APR-2000;
20-JUN-2000;
19-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-2000;
15-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-OCT-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-AUG-2001
                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                          AAM78338;
                                                                                                                                                                                                                               ~
                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                             AAM78338
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
qq
                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                   à
```

```
.
8
                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
       Ma Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fusion gene with human serine protease catalytic domain protein #12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Activation construct; catalytic; fusion gene; expression vector; proteolysis; serine protease; zymogen precursor; characterisation; analysis; modulator; identification.
                                                                                                                                                                                                                                               Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117 SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGRLQTNG-ALPDDLKQ
       Cao Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
       Xu C, Cao Y,
R, Wang ZW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
Drmanac RT, Asundi V, Zhou P,
Wang J, Zhang J, Ren F, Chen
Wejhrman T, Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35.0%; Score 427; DB 22;
41.0%; Pred. No. 1.4e-28;
tive 36; Mismatches 91;
                                                                                                                                                                                                                                                                                                                                                    Claim 20; Page 3226-3228; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB36481 standard; Protein; 319 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-APR-2000; 2000WO-US09973.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
les 98; Conservat
                                                                                                                                        WPI; 2001-476283/51.
N-PSDB; AAK51471.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1052 AA;
```

```
The present invention describes an expression vector (I) comprising in frame and in order, a presequence, and a cloning site for the in frame insertion of catalytic domain cassette. (I) can be used as a modulator of proteins expressed from a zymogen activation construct. The recombinant catalytic domain of serine protease is useful for identifying compounds modulating the activity of proteases. Is expressed and activated from the zymogen activation construct. A method from the present invention comprises combining a modulator of the modulator on the protein of a protease and mesuring an effect of the modulator on the protein preferably inhibiting or enhancing its enzymatic activity or stimulation or inhibition of proteolysis mediated (b) the expressed catalytic domain. The present sequence represents a fusion gene with a human serine protease catalytic domain protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ζ,
                                                                                                                                                                           Expression vector for producing recombinantly producing serine protease domains, comprising a presequence, a prosequence, and a cloning site for the insertion of catalytic domain cassette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166 VGNVTPAHLQQVALPLVTVNQCRQYWDSS-----ITDSMICAG--GAGASSCQGDSG 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52 QDSSGFHFCGGSLISQSWVVTAAHCNVSPGRHF-----VVLGEYDRSSNAEPLQVLSVSR 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              107 AITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLS-G 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178 VSLLTPKPLQQLEVPLISRETCNCLYNIDAKPEEPHFVQEDMVCAGYVEGGKDACQGDSG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MLLLSLTLSLVLLGSSWGCGIP-----AIKPALSFSQRIVNGENAVLGSWPWQVSL 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97; Indels 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 34.7%; Score 424; DB 21; Length 319; Best Local Similarity 35.9%; Pred. No. 5.8e-29; Matches 92; Conservative 39; Mismatches 97; Indels 26
                                                                                                                                                                                                                                                       Disclosure; Page 47-50; 89pp; English
                                                      (ORTH ) ORTHO-MCNEIL PHARM RES INC.
                                                                                                Darrow A, Qi J, Andrade-Gordon P;
                  99US-0303162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  216 GPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GPLSCPVEGLWYLTGI 253
                                                                                                                                      WPI; 2000-687533/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      319 AA;
                  30-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
```

Search completed: December 20, 2002, 15:16:39 Job time : 37.6087 secs

, •

```
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
```

- protein search, using sw model OM protein

December 20, 2002, 15:14:28; Search time 2.08696 Seconds Run on:

(without alignments) 1520.126 Million cell updates/sec

US-09-856-319B-4_COPY_1_33

166 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33 Perfect score: Sequence: Scoring table:

283224 segs, 96134422 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched:

283224 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_73:* 1: pir1:* 2: pir2:* 3: pir3:* 4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		d			SUMMARIES	
Result No.	Score	Query Match	Ġ	DB		Description
-	150	90.4	264	. 2	I38136	chymotrypsin-like
7	16	45.8	263	~	A21195	-
m	73	44.0		7	A31299	-
4	67	$^{\circ}$	263	-	KYRTB	chymotrypsin (EC 3
S	55.5	33.4	835	7	F90260	_
9	55	ന	231	~	A49265	flt3/flk-2 ligand
7	55	33.1	242	7	AE0906	monofunctional bio
60	55	33.1	268	~	S68826	pancreatic elastas
6	55	33.1	268	7	S68825	
10	55	33.1	466	7	T05664	hypothetical prote
11	52	31.3	219	~	B71511	æ
12	52	31.3	241	~	AI0431	ional
13	52	31.3	292	~	T10106	ന
14	52	31.3	557	~	JE0346	
15	52	31.3	579	~	T04378	peptide transport
16	51	30.7	826	~	T02268	potassium transpor
17	51	30.7	1186	7	T03180	tyrosine protein k
18	50.5	30.4	384	~	AH0241	
19	20	30.1	247	~	S23504	chymase (EC 3.4.21
20	20	30.1	260	~	S26043	(EC 3
21	20	30.1	363	-	CBUTB	ubiquinoi-cytochro
22	20	30.1	742	~	S55098	probable membrane
23	49.5	29.8	312	7	QQBE07	ÚS10 protein - hum
24	49.5	29.8	484	~	T10255	nitrite transport
25	49.5	29.8	739	П	A70204	endopeptidase Clp
26		29.8	918	~	F86709	cation-transportin
27	49	29.5	94	~	A83108	hypothetical prote
28	49	29.5	104	~	A22706	
29	49	29.5	141	~	F72121	ATP synthase, chai

G 4 0	chymotrypsin (EC 3 chymotrypsin.like chymotrypsin (EC 3 chymotrypsin (EC 3 chymotrypsin (EC 3 probable DNA methy conserved hypothet hypothetical prote	L-1 - human 1996 #text_change 22-Jun-1999 sto, A.B.; Prydz, H. an genes on chromosome 16q22.1. b:8268911 /PDBJ PIDN:CAA50710.1; PID:9406228
D86502 \$16575 \$16575 \$69452 \$70771 \$25025 \$61414	A23473 A23473 KYBOB KYBOB S47537 G83435 A83377 S38125	1) CTR 06-Sep- T.; Kol ated hum 544; PMI GB/EMBL
00000000	000000	(EC -rev 1ste 19te 11ve MUID: ated
141 222 319 344 387 65 310	17 126 245 245 304 331 418	rypsin-like proteinase (EC 3 ides: Homo saplens (man) s: 06-Sep-1996 #sequence_revis ssslon: 138136 en, F.; Solheim, J.; Kristens tol. Genet. 2, 1589-1595, 1993 tol. Genet. 2, 1589-1595, 1993 en: A tight cluster of five un rence number: 138135; MUID:94 ssslon: 138136 euus: preliminary; translated f. cule type: DNA dues: 1-264 <res> s: references: EMBL:X71874; NI tics: s: GDB:CTRL position: 16422.1</res>
2222555 222255 222255 22225 2225 2225		te prote sapiens (196 #sc. 196 #sc. 196 #sc. 196 #sc. 196 #sc. 196 #sc. 196 #sc. 198
44 88 44444 4 000000000000000000000000000	4 4 4 4 4 4 4 4 0 0 0 0 0 0 0 0 0	ssin-11) ssin-11) ssin-11) ssin-11) ssin-11) ssin-12) ssin-12) ssin-12) ssin-12) ssin-12) ssin-12) ssin-12) ssin-12)
30 32 33 34 35 37	8 6 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	RESULT 1 138136 hymotrypsin-like proteinase (EC 3.4.2 5) Species: Homo saptens (man) 5) Accession: 138136 hum. Mol. Genet. 2, 1589-1595, 1993 by Accession: 138136 by Accession: 138136 by Accession: 138136 by Reference number: 138135; MUID:94093 by Residuas: 1-264 CRES by Residues: 1-264 CRES by Genetics: conserved and position: 16922.1-16922.1

ö Gaps ö 90.4%; Score 150; DB 2; Length 264; 87.9%; Pred. No. 9.2e-12; ative 3; Mismatches 1; Indels RESULT 1
138136
chymotrypsin-like proteinase (EC 3.4.21.-) CTRL-1 - human
C; Species: Homo sapiens (man)
C; Date: 06.Sep-1996 #sequence_revision 06-Sep-1996 #text_chang
C; Accession: 138136
R; Larsen, F.; Solheim, J.; Kristensen, T.; Kolsto, A.B.; Prydi
Hum. Mol. Genet. 2, 1589-1555, 1993
A; Title: A tight cluster of five unrelated human genes on chrc
A; Reference number: 138135
A; Cacession: 138136
A; Accession: 138136
A; Reference number: 138135
A; Cacession: 138136
A; Residues: 1-264 ARES>
A; Cacess-references: EMBL:X71874; NID:q406226; PIDN:CAA50710.1,
C; Genetics:
A; Gene: GDB:CTRL
A; Caces-references: GDB:204061
A; Map position: 16222.1-16422.1
A; Introns: 18/1; 52/3; 79/2; 106/3; 167/1; 211/3
C; Superfamily: trypsin homology
C; Keywords: hydrolase; serine proteinase
F; 34-257/Domain: trypsin homology ARR>
F; 75,121,214/Active site: His, Asp, Ser #status predicted 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNOR 33 Conservative Query Match Best Local Similarity Matches 29; Conserv ò

chymotrypsin (EC 3.4.21.1) 2 precursor - dog C:Species: Canis lupus familiaris (dog) C:Date: 27-Jul-1990 #sequence_revision 27-Jul-1990 #text_change 22-Jun-1999 C:Accession: A21195 R:Pinsky, S.D.; LaForge, K.S.; Luc, V.; Scheele, G. Proc. Natl. Acad. Sci. U.S.A. 80, 7486-7490, 1983 A;Title: Identification of DNA clones encoding secretory isoenzyme forms: sequence d A;Reference number: A21195; MUID:84170253; PMID:6584866 A;Cross-references: GB:K01173; NID:g163945; PIDN:AAA30841.1; PID:g163946 C;Superfamily: trypsin; trypsin homology C;Keywords: hydrolase; protein digestion; serine proteinase F;34-256/Domain: trypsin homology <TRY> A Status: preliminary A Molecule type: mRNA A; Residues: 1-263 <PIN> RESULT 2 g

```
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-163, 'G', 165, 'HYAG' < RES>
A;Residues: 1-163, 'G', 165, 'HYAG' < RES>
A;Cross-references: EMBL:U29875; NID:91072039; PIDN:AAA90952.1; PID:91072041
A;Accession: 149346
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-197, 'L', 198-231 < RE2>
A;Cross-references: EMBL:U29875; NID:91072039; PIDN:AAA90951.1; PID:91072040
A;Residues: Tiupepper. J: Campbell, D.; McClanahan, T.; Zurawski, S.; Bazan, J.F.; Felt, A.; Muench, M.; Kelner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Zlotnik Nature 368, 643-648, 1994
A;Title: Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopol A;Reference number: S43290; MUID:94195428; PMID:8145851
                                                                                                                                                                                                                                                                                                                                                                                                                               R;She, Q.; Singh, R.K.; Confalonieri, F.; Zivanovic, Y.; Allard, G.; Awayez, M.J.; Ch Jong, I.; Jeffries, A.C.; Kozera, C.J.; Medina, N.; Peng, X.; Thi-Ngoc, H.P.; Redder arrett, R.A.; Ragan, M.A.; Sensen, C.W.; Van der Oost, J. Abescription: Sulfolobus solfataricus complete genome.

A;Reference number: A99139
A;Reference number: A99139
A;Status: preliminary
A;Molecule type: DNA
A;Residues: I-935 < KURRA

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 13-dan-1995 #sequence_revision 13-Jan-1995 #text_change 08-Oct-1999
C;Accession: A49265; I49347; I49346; S43290
R;Lyman, S.D.; James, L.; Vanden Bos, T.; de Vries, P.; Brasel, K.; Gliniak, B.; Holl D:; Williams, D. E.; Beckmann, M.P.
Cell 75, 1157-1167, 1993
A;Title: Molecular cloning of a ligand for the flt3/flk-2 tyrosine kinase receptor: a A;Reference number: A49265; MUID:94084791; PMID:7505204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:AE006641; NID:913814269; PIDN:AAK41341.1; GSPDB:GN00155 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L.; Escobar,
                                                                                                                                                                                                                                         hypothetical protein SSO1079 [imported] - Sulfolobus solfataricus
C;Species: Sulfolobus solfataricus
C;Date: 24 May-2001 #Sequence_revision 24-May-2001 #text_change 24-May-2001
C;Accession: F90260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A.Accession: A49265
A.Status: preliminary
A.Molecule type: mRNA
A.Residues: 1-231 -LYMA
A.Cross references: GB:L23636; NID:g439441; PIDN:AAA39436.1; PID:g439442
R.Lyman, S.D.; Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Escob Oncogene 11, 1165-1172, 1995
A.Title: Structural analysis of human and murine flt3 ligand genomic loci.
A.Reference number: 139075; MuID:96032581; PMID:7566977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 55.5; I
Pred. No. 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLLSLTLSLV-----LLGSSWGCGVP 22
29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLLLSLTLSLVLLGSSWGCGVPAITPALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-197, 'L', 198-231 <HAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 33.4%;
Best Local Similarity 44.8%;
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: SSO1079
    _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
    ò
                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Tomita, N.; Izumoto, Y.; Horili, A.; Dol, S.; Yokouchi, H.; Ogawa, M.; Mori, T.; Matsub Biochem. Biophys. Res. Commun. 158, 569-575, 1989
A;Title: Molecular cloning and nucleotide sequence of human pancreatic prechymotrypsinog A;Reference number: A31299; MUID:89134264; PMID:2917002
A;Accession: A31299
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-263 <TOM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chymotrypsin (EC 3.4.21.1) B precursor - rat
N.Alternate names: chymotrypsinogen B
C; Species: Rattus norvegicus (Norway rat)
C; Date: 28-Dec-1987 #sequence_revision 28-Dec-1987 #text_change 18-Jun-1999
C; Accession: A22658
R; Bell, G.I.; Quinto, C.; Quiroga, M.; Valenzuela, P.; Craik, C.S.; Rutter, W.J.
J. Biol. Chem. 259, 14265-14270, 1984
A.Title: Isolation and sequence of a rat chymotrypsin B gene.
A.Reference number: A22658; MUID:85054881; PMID:6209274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Homo sapiens (man)
C;Date: 08-Jun-1989 #sequence_revision 08-Jun-1989 #text_change 22-Jun-1999
C;Accession: A31299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A. Molecule type: DNA
A. Residues: 1-263 <BEL>
A. Residues: 1-263 <BEL>
A. Residues: 1-263 <BEL>
A. Cross-references: GB: KO2298; NID: g203653; PIDN: AAA98732.1; PID: g203654
C. Genetics:
A. Introns: 18/1; 52/3; 79/2; 105/3; 166/1; 210/3
C. Superfamily: trypsin; predicted <SIG>
F. 19-30 Domain: signal sequence #status predicted <SIG>
F. 19-33 Domain: propeptide #status predicted <RO>
F. 34-265 Domain: trypsin homology <TRY>
F. 34-256 Domain: trypsin homology <TRY>
F. 35, 120, 213 Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references: GB:M24400; NID:g181189; PIDN:AAA52128.1; PID:g181190
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 44.0%; Score 73; DB 2; Length 263; I Similarity 55.2%; Pred. No. 0.058; 16; Conservative 3; Mismatches 10; Indels
                                                                        Score 76; DB 2; Length 263;
Pred. No. 0.024;
3; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40.4%; Score 67; DB 1; Length 263; 44.8%; Pred. No. 0.34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A)Cross references: GDB:119820; OMIM:118890
A;Cross references: GDB:119623.1
C;Superfamily: trypsin; trypsin homology
C;Superfamily: trypsin; trypsin homology
F;34-256/Domain: trypsin homology CTRY>
F;75,120,213/Active site: His, Asp, Ser #status predicted
    F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chymotrypsin (EC 3.4.21.1) precursor - human
                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                            Query Match
Best Local Similarity 55.2%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 44.8
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene: GDB:CTRB1; CTRB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
S.; Lammel, C.J.; Fan, J.; Marathe, R.; Aravind, L.; Mitche
                                                                                                                                                                                                                                                                           pancreatic elastase (EC 3.4.21.36) isoform 1 precursor - human
N;Alternate names: caldecrin isoform 1
C;Species: Homo sapiens (man)
C;Date: 04-Dec-1997 #sequence_revision 12-Dec-1997 #text_change 28-May-1999
C;Accession: S68825
R;Tomomura, A.; Akiyama, M.; Itoh, H.; Yoshino, I.; Tomomura, M.; Nishii, Y.; Noikuz
FBSS Lett. 386, 26-28, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession: T05664
R; Bevan, M.; Wedler, H.; Kutzner, M.; Wambutt, R.; Bancroft, I.; Mewes, H.W.; Mayer, submitted to the Protein Sequence Database, February 1999
A; Reference number: 215420
A; Accession: T05664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probable sugar nucleotide phosphorylase - Chlamydia trachomatis (serotype D, C;Species: Chlamydia trachomatis
C;Date: 13-Sep-1998 #sequence_revision 13-Sep-1998 #text_change 20-Apr-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein F22113.130 - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 23-Apr_1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-268 <TOM>
A;Cross-references: GB:S82198; NID:91839466; PIDN:AAB47104.1; PID:91839467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Experimental source: pancreas
C; Superfamily: trypsin; trypsin homology
C; Superfamily: trypsin; trypsin homology
C; Reywords: hydrolase; pancreas; serine proteinase; zymogen
F; 11-16/Domain: signal sequence #status predicted <SIG>
F; 77-29/Domain: propeptide #status predicted <PRO>
F; 30-268/Product: pancreatic elastase isoform 1 #status predicted
F; 30-262/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 268;
12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Molecular cloning and expression of human caldecrin. A;Reference number: $68825; MUID:96221265; PMID:8635596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:AL035539
A;Experimental source: cultivar Columbia; BAC clone F22I13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MLLLSLT-LSLVLLGS-----SWGCGVPAITPALSYNQ 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33.1%; Score 55; DB 2;
31.0%; Pred. No. 19;
tive 10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Map position: 4
A;Introns: 50/3; 87/1; 148/3; 178/2; 265/3; 349/3
A;Note: F22113.130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 55;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
           LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                       33.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 40.79
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33.19
Best Local Similarity 31.09
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: B71511
R; Stephens, R.S.; Kalman, S
Science 282, 754-759, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Residues: 1-466 <BEV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: S68825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Genetics
           æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              monofunctional blosynthetic peptidoglycan transglycosylase (EC 2.4.2.-) [imported] - Sal Cispecies: Salmonella enterica subsp. enterica serovar Typhi A:Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 27-Nov-2001 C;Accession: AE0906 A;Status: Parry, C; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Itle: Complete genome sequence of a multiple drug resistant Salmonella enterica serov A;Status: preliminary A;Molecule type: DNA A;Status: AE0906 A;Status: AE0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pancreatic elastase (EC 3.4.21.36) isoform 2 precursor - human
N;Alternate names: caldecrin isoform 2
C;Species: Homo sapiens (man)
C;Date: 04-Dec-1997 #sequence_revision 12-Dec-1997 #text_change 30-Jan-1998
C;Accession: S68826
C;Accession: S68826
C;Accession: S68826
C;Accession: S68826
A;Aitle: Molecular cloning and expression of human caldecrin.
A;Aitle: Molecular cloning and expression of human caldecrin.
A;Reference number: S68825
A;Accession: S68826
A;Acces
                                               4-Val
                                               in having
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                       Gaps
                                               2a
A; Experimental source: clone T110
A; Note: the sequence from F1g. 2c is inconsistent with that from F1g.
C; Genetics: 11/3; 49/3; 67/3; 115/3; 164/1; 224/3
A; Introns: 11/3; 49/3; 67/3; 115/3; 164/1; 224/3
C; Keywords: transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 55; DB 2; Length 268;
Pred. No. 12;
5; Mismatches 11; Indels
                                                                                                                                                                                                                                   Length 231;
                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: mtgA
C;Keywords: glycosyltransferase; pentosyltransferase
                                                                                                                                                                                                                                           .;
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                   Score 55; DB 2
Pred. No. 10;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 55; DB 2
Pred. No. 11;
3; Mismatches
                                                                                                                                                                                                                                       33.18;
61.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.1%;
illarity 40.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.18;
58.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192 LLLLLLPLTLVLLAAAWG 209
                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 WGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                       Query Match 33.1
Best Local Similarity 61.1
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery Match
Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
es 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
```

ö

strain U

.; ;

ö

Gaps

ö

Indels

Length 292;

~

Score 52; DB 2 Pred. No. 30; 3; Mismatches

31.3%; 55.0%;

```
F;44-292/Product: chitinase #status experimental <MAT> F;48-284/Domain: plant chitinase homology <PCH>
                                                                                                                                                                                          1 MLLLSLTLSLVLLGSSWGCG 20
                                                                                                                                                                                                                        Local Similarity 55.0
nes 11; Conservative
                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                          δŏ
                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
A;Title: Genome sequence of an obligate intracellular pathogen of humans: Chlamydia trac
A;Reference number: A71570; MUID:99000809; PMID:9784136
A;Accession: B71511
A;Status: preliminary
                                                                                                    A;Molecule type: DNA
A;Residues: 1-219 <ARN>
A;Cross-references: GB:AE001320; GB:AE001273; NID:g3328891; PIDN:AAC68062.1; PID:g332889
A;Experimental source: serotype D, strain UN-3/Cx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        monofunctional biosynthetic peptidoglycan transglycosylase (EC 2.4.2.-) [imported] - Yez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A) Description: catalyzes the hydrolysis of the beta-1,4-linkages of N-acetyl-D-glucosami C;Superfamily: lectin-related plant chitinase; hevein chitin-binding domain homology; pl C;Keywords: glycosidase; hydrolase; polysaccharide degradation
F;l-10,Domain: signal sequence #status predicted <SIG>
F;22-43/Domain: propeptide #status predicted <PRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: A10431
R; Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell, Nature 413, 523-527, 2001
A; Title: Genome sequence of Yersinia pestis, the causative agent of plague.
A; Reference number: AB0001; MUID:21470413; PMID:11586360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chitinase (EC 3.2.1.14) (class II, acidic) precursor - sweet orange
C;Species: Citrus sinensis (sweet orange)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000
C;Accession: T10106
R;Nairn, C.J.; Niedz, R.P.; Hearn, C.J.; Osswald, W.F.; Mayer, R.T.
Biochim: Biophys. Acta 1351, 22-26, 1997
A;Title: cDNA cloning and expression of a class II acidic chitinase from sweet orange.
A;Reference number: 216952; MUID:97236427; PMID:9116036
                                                                                                                                                                                                                                                                                                                                                                                 ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Residues: 1-241 < KUR>
A; Cross-references: GB:AL590842; PIDN:CAC92781.1; PID:g15981474; GSPDB:GN00175
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-292 <NAI>
A;Cross-references: EMBL:270032; NID:g1220143; PIDN:CAA93847.1; PID:g1220144
A;Experimental source: cv. Valencia; callus
C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C:Species: Yersinia pestis
C:Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 27-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                         2; Length 219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 52; DB 2; Length 241.
Pred. No. 25;
1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                              11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                4 LSLTLSLVLLGSSWG------CGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                               pentosyltransferase
                                                                                                                                                                                                                                                                                                                       Score 52; DB 2
Pred. No. 23;
3; Mismatches
                                                                                                                                                                                                                C;Genetics:
A;Gene: yg6P
C;Superfamily: sugar nucleotide phosphorylase
                                                                                                                                                                                                                                                                                                                       Query Match 31.3%;
Best Local Similarity 36.4%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: mtgA
C;Keywords: glycosyltransferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17 WGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A, Accession: A10431
A; Status: preliminary
A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AI0431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
```

```
R;Weet, C.E.; Waterworth, W.M.; Stephens, S.M.; Smith, C.P.; Bray, C.M. Plant J. 15, 221-229, 1998
A;Title: Cloning and functional characterisation of a peptide transporter expressed i) A;Teference number: 215321; WUID:98388652; PMID:9721680
A;Accession: T04378
           C.Species: Rattus norvegicus (Norway rat)
C.Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000
C.Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000
C.Sekine: 7: Kusuhara, H.; Utsunomiya-Tate, N.; Tsuda, M.; Sugiyama, Y.; Kanal, Y.;
Biochem. Blophys. Res. Commun. 251, 586-591, 1998
A.Title: Molecular cloning and characterization of high-affinity carnitine transporte A.Accession: JE0346; MUID:99011422; PMID:9792817
A.Accession: JE0346
A.Status: preliminary
A.Molecule type: mRNA
A.Residues: 1-557 <SEK>
                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:AF023472; NID:g2655097; PIDN:AAC32034.1; PID:g2655098 A;Experimental source: cv. Maris Otter C;Genetics:
                                                                                                                                                                                                                                                                                                                    A;Cross-references: DDBJ:AB017260; NID:93869208; PIDN:BAA34399.1; PID:93869209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Hordeum vulgare (barley)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 11-May-2000
C;Accession: T04378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; Length 579;
56;
                                                                                                                                                                                                                                                                                                                                                                      Length 557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 54;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6; Mismatches
high-affinity carntine transporter, CT1 - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: December 20, 2002, 15:19:49 Job time : 3.08696 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 SLTLSLVL----LGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31.3%; Score 52; 38.7%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                         Score 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide transport protein - barley
                                                                                                                                                                                                                                                                                                                                                                         31.3%;
61.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||||:||: || |: ||
258 MLLLALTVPGVLCGALWG 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
```

1、打造場で西北京

```
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
```

OM protein - protein search, using sw model

December 20, 2002, 15:12:58 ; Search time 9.04348 Seconds (Without alignments) 1210.790 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-856-319B-4 1418 1 MLLLSLTLSLVLLGSSWGCG......AMYTRVSKFSTWINQVMAYN 264

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

112892 seqs, 41476328 residues Searched:

112892 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 , Maximum DB seq length: 20000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	313 homo	canis	P17538 homo sapien	gadus	P00767 bos taurus	P07338 rattus norv	P00766 bos taurus	gadu	_	Q29461 bos taurus	P00774 rattus norv	homo	homo	bos t	Q99895 homo sapien	P05208 mus musculu	P55091 rattus norv	P20918 mus musculu	P09093 homo sapien	homo	homo	_	_	••	P80009 canis famil	Q9es87 rattus norv	P57727 homo sapien	a	Q02844 mus musculu	Q9esd1 mus musculu	Q16651 homo sapien	l sus	P80010 equus cabal
SUMMARIES	ΩI	CTRL_HUMAN	CTR2_CANFA	CTRB_HUMAN	CTRA_GADMO	CTRB_BOVIN	CTRB_RAT	CTRA_BOVIN	CTRB_GADMO	EL2_PIG	EL2_BOVIN	EL2_RAT	EL2A_HUMAN	EL3B_HUMAN	CAC3_BOVIN	CLCR_HUMAN	EL2_MOUSE	CLCR_RAT	PLMN_MOUSE	EL3A_HUMAN	PLMN_HUMAN	EL2B_HUMAN	PLMN_SHEEP	PLMN_MACMU	PLMN_PIG	PLMN_CANFA	PSS8_RAT	TMS3_HUMAN	TRYT_MERUN	MCT7_MOUSE	PSS8_MOUSE	PSS8_HUMAN	TRYT_PIG	PLMN_HORSE
	DB	٦	ч	7	-	-	~	~	ч	-		1	-	П	٦			~	٦	-	-	П	ч	П	-	Н	-	-	-	_	٦	Н	٦	-
	Length	7	263	263	263	245	263	245	245	569	269	271	569	270	253	268	271	268	812	270	810	269	343	810	790	333	342	454	270	273	342	343	275	338
dР	Query	an.	ത	ന	ഹ	S.	ın	-	52.8	\sim	വ	ທ	വ	ശ	LO.	~	•	₹.	-4"	•	•	m	ന	ന	ന	ന	ന	ന	N	a	a	N	N	32.4
	Score	1269	832.5	822.5	798.5	786.5	781.5	774.5	748.5	537	520	517	515	513.5	503.5	495.5	492	486.5	485.5	484.5	484	479	477	475	474	4	468.5	468	4	63	62	462.5	460.5	459
	Result No.	1	7	m	4	ស	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							31		33

P00762 rattus norv Q91948 mus musculu P00761 sus sucrofa Q28153 bos taurus P50343 rattus norv P00773 rattus norv P15944 canis famil Q29485 erinaceus e P06871 canis famil Q90627 galius gamil Q90627 galius gamil P06868 bos taurus
TRYL RAT MCT7_RAT TMS2_MOUSE TMS2_MOUSE ELL_BOVIN MCT6_RAT ELL_RAT TRYT_CANFA TRYT_CANFA TRYL_CANFA TRYL_CHICK PLMN_BOVIN
аннананана
246 231 231 246 246 815 815 815
331.3 311.5 311.5 311.2 311.2
454.5 451.5 451.5 447 445.5 444 444.3 444.5 444.5
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

## ALIGNMENTS

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dd
                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                              ö
                                                                                                                                                     61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                     LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                     GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                        121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                              Gaps
                                                                                                    1 MLLLSLTLSLTLSLVLLGSSWGCGVPAITPALSYNORIVNGENAVPGSWPWOVSLODNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. 80:7486-7490(1983).
-1- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-1-Xaa, Trp-1-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE-84170253; Pubmed-6584866;
Pinsky S.D., Laforge K.S., Luc V., Scheele G.;

Aldentification of cDMA clones encoding secretory isoenzyme forms:
sequence determination of canine pancreatic prechymotrypsinogen 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                              ö
                                     Length 264;
                                                              Indels
           3F629F02FA6DDFB4 CRC64;
                                    Score 1269; DB 1;
Pred. No. 6.6e-102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -1- CATALYIIC AVAILARA.
Phe-1-Xas, Leu-1-Xaa.
-1- SUBCELLUIAR LOCATION: Extracellular.
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
13-TUN-2002 (Rel. 14), Last annotation update)
Chymotrypsinogen 2 precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                263 AA
                                                             25; Mismatches
 BY SIMILARITY
                                     Score 1269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                          241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                       241 VRAPAVYTRVSKFSTWINOVIAYN 264
           28002 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; K01173; AAA30841.1; -.
                                    89.5%;
                                                 86.4%;
                                                              Matches 228; Conservative
                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR; A21195; A21195.
HSSP; P00766; IACB.
210 ;
264 AA;
                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                               CTR2_CANFA
P04813;
DISULFID
             SEQUENCE
                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                     CTR2_CANFA
                                                                                                                                         61
                                                                                                                                                                                                                                          181
                                                   Best
                                                                                                                                                                                                                                                                                                                                                        RESULT
 SO
                                                                                                               g
                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                  g
                                                                                       ò
                                                                                                                                         ô
                                                                                                                                                               염
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                          ò
```

```
61 GGSLISEDWVVTAAHCGVRT-THOVVAGEFDOGSDAESIOVLKIAKVFKNPKFNMFTINN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.;
Submitted (MAR.2001) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa, Phe-|-Xaa, Leu-|-Xaa, Location: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tomita N., Izumoto Y., Horii A., Doi S., Yokouchi H., Ogawa M.,
                                                                                                                                                                                                                                                                                                                                                                                                   ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Molecular cloning and nucleotide sequence of human pancreatic
                                                                                                                                                                                                                                                                                                                                                     Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                        CHYMOTRYPSIN 2, A CHAIN.
CHYMOTRYPSIN 2, B CHAIN.
CHYMOTRYPSIN 2, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                            2A2F449D813B3961 CRC64;
                                                                                                                                                                                                                                                                                                                                      58.7%; Score 832.5; DB 1;
57.2%; Pred. No. 1.9e-64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prechymotrypsinogen cDNA.";
Biochem. Biophys. Res. Commun. 158:569-575(1989)
                                         CHYMOTRYPSINOGEN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-AUG-1990 (Rel. 15, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen B precursor (EC 3.4.21.1).
CTRB1 OR CTRB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240 TSTPGVYARVTKLIPWVQQILQAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Pancreas;
MEDLINE-89134264; PubMed-2917002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-AUG-1990 (Rel. 15, Created)
                                                                                                                                                                                                                                                                                                          27787 MW;
                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                           263
31
164
263
75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mori T., Matsubara K.;
                                                                                                                                                                                                                                                                                                            263 AA;
                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
  Serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                               Best Local Sim
Matches 151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTRB_HUMAN
  Hydrolase;
                                                                                                                                 ACT_SITE
ACT_SITE
                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                               ACT_SITE
                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTRB_HUMAN
                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
```

1;

```
Matches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
  음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Biolinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                   ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQGSDEENIQVLKIAKVFKNPKFSILLTVNN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MAFLWLLSCWALLGTTFGCGVPAIHPVLSGLSRIVNGEDAVPGSWPWQVSLQDKTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGGGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                      CHYMOTRYBEIN B. A CHAIN.
CHYMOTRYBEIN B. B CHAIN.
CHYMOTRYPEIN B. C CHAIN.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                          Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
BARRT; SM00200; Tryp_SPc; 1.
PROSITE; PS50240, TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LIS; 1.
PROSITE; PS00135; TRYPSIN_LIS; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                  74; Indels
                                                                                                                                                                                                                                                                                                                                                       SIMILARITY.
SIMILARITY.
SIMILARITY.
SIMILARITY.
4C1C055A490B8701 CRC64;
                                                                                                                                                                                                                                                               CHYMOTRYPSINGEN B.
                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 1.4e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsin A precursor (EC 3.4.21.1).
Gadus morhua (Aliantic cod).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                  38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              Score 822.5;
                                                                                                                                                                     Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                         InterPro; IPR001314; Chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 :| || || || || 240 TSSPGVYARVTKLIPWVQKILAAN 263
                                                                                         EMBL; BC005385; AAH05385.1; -. PIR; A31299; A31299. HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                        27870 MW;
                                                                                                                                                                                                                                                                                                                                                                                                             58.0%;
                                                                                 EMBL; M24400; AAA52128.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 151; Conservative
                                                                                                                         MEROPS; S01.152; -.
Genew; HGNC:2521; CTRB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                         31
164
263
75
75
120
213
                                                                                                                                                                    IPR001254;
                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                              209
263 AA;
                                                                                                                                              MIM; 118890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTRA_GADMO
P47796;
                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                 ACT_SITE
ACT_SITE
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                         CHAIN
CHAIN
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTRA_GADMO
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72 TAAHCUV-KNYHRVVLGEHDRSSNSEGVQVMTVGQVFKHPRYNGFTINNDILLVKLATPA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72 TAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                         Asgeirsson B., Bjarnason J.B.;
"Structural and kinetic properties of chymotrypsin from Atlantic cod (Gadus morhua). Comparison with bovine chymotrypsin.";
Comp. Blochem. Physiol. 99B:327-335(1991).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa, Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELUULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 LLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVV 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 LFRRTYGCGRPAISPVITGYSRIVNGEEAVPHSWSWQVSLQDQTGFHFCGGSLINENWVV
                         Neoteleostel;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
(BY SIMILARITY).
(BY SIMILARITY).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
extinopterygii; Neopterygii; Teleostel; Euteleostel; Neoteleostel.
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
NCBL_TaxID-8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P00766; ICHC.

InterPro: PR001314; Chymotrypsin.

InterPro: PR001234; Ser_protease_Try.

Pfam; PF00089; trypsin; I.

PRINTS; PR00722; CHYMOTRPSIN.

SMART; SM00020; TrypSFC; I.

PROSTIE; PS00134; TRYPSIN_DOM; I.

PROSTIE; PS00134; TRYPSIN_HIS; I.

PROSTIE; PS00135; TRYPSIN_HIS; I.

Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                            "Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.";
Biochim. Biophys. Acta 1219:211-214(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                      MEDLINE-94368860; PubMed-8086467;
Gudmundsdottir A., Oskarsson S., Eakin A.E., Cralk C.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47AAC699A0A64FBB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .5;
1.6e-61;
70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 1.6e 38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56.3%; Score 798.5; 56.9%; Pred. No. 1.6
                                                                                                                                                                                                                                                                                                                                             TISSUE-Pyloric caeca;
MEDLINE-92111252; PubMed-1764912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28294 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X78490; CAA55242.1; -.
                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 19-30 AND 34-49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                  TISSUE-Pyloric caeca;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213
19
19
104
1186
209
21
25
29
44
                                                                                                                                                                                                                       Bjarnason J.B.;
```

ï

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
               61 TIS-DVVVAGEEDOGLETEDTQVLKIGKVFKNPKFSILTVRNDITLLKLATPAQFSETVS 119
                                                                                                                                     180 MICAGASGVSSCMGDSGGPLVCQKNGAWTLAGIVSWGSSTCSTSTPAVYARVTALMPWVQ 239
                                                                            199 MICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWIN 258
                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                                                         139 PVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Isolation and sequence of a rat chymotrypsin B gene.";
J. Biol. Chem. 259:14265-14270(1984).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa, Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR00125; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SS00140; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-85054881; Pubmed-6209274;
Bell G.I., Quinto C., Quiroga M., Valenzuela P., Craik C.S.
Rutter W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAY SYSTEM (BY SI
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHYMOTRYPSINOGEN B.
                                                                                                                                                                                                                                                                                                                                 01-APR-1988 (Rel. 07, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen B precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                   01-APR-1988 (Rel. 07, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; K02298; AAA98732.1; -.
                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31
164
263
263
75
75
120
213
76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P00766; 1CHG.
MEROPS; S01.152; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A22658; KYRTB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10116;
                                                                                                                                                                               259 QVMAYN 264
                                                                                                                                                                                                   : : | |
240 ETLAAN 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                        CTRB_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                             CTRB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                       KESULT 6
CTRB_RAT
                                                                                                                                                 Ωp
                            g
                                                                                                                     δ
                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       Barbro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÷
                                  SEQUENCE, DISULFIDE BONDS, AND ACTIVE SITE.
MEDILME-68238908; bubMed=5649671;
Similite L.B., Furka A., Magabhushan N., Stevenson K.J., Parkes C.O.;
"Structure of chymotrypsinogen B compared with chymotrypsinogen A and
              132 RYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYW 191
                                                                         192 GARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVS 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CGVPAIQPVLSGLARIVNGEDAVPGSWPWQVSLQDSTGFHFCGGSLISEDWVVTAAHCGV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               trypsinogen.";
Nature 218:343-346(1968)
-i- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                 21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2012 (Bovine)

Chymotrypsinogen B (EC 3.4.21.1).

Bos taurus (Bovine).

Mammalia; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Bovidae; Bovinae; Sctartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Phe-1-Xaa, Leu--Xaa.
-! SUBCELGLIAR LOCATION: Extracellular.
-! SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- DATABASE: NAME-Worthington enzyme manual;
WWW-*http://www.worthington-blochem.com/manual/C/CHY.html".
PIR; A00953; KYBOB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ή;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; SOI.152; -...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001324; Ser_protease_Try.
Pro; IPR00122; CHYMOTRYPSIN.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_LDOM; 1.
PROSITE; PS00134; TRYPSIN_LIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25755 MW; 678016446FF5FEB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHYMOTRYPSIN B, A CHAÎN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SYSTEM.
SYSTEM.
SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55.5%; Score 786.5; DB 1;
57.7%; Pred. No. 1.6e-60;
iive 32; Mismatches 71;
                                                                                                                                                                                                                                         245 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHARGE RELAY S
CHARGE RELAY S
CHARGE RELAY S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142; Conservative
                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146
245
245
102
1122
201
201
                                                                                                                                   252 KFSTWINQVMAYN 264
                                                                                                                                                               251 ELRAWVDOTIAAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
42
136
168
191
245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9913;
                                                                                                                                                                                                                                       CTRB_BOVIN
P00767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                            CTRB_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                           RESULT
                                           g
                                                                                                    g
                                                                                                                                   ŏ
                                                                                                                                                                                                                                         a
              ò
                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

SIMILARITY). SIMILARITY). SIMILARITY).

1

S

```
Histidine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4VGC;
1HJA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1AB9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1VGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                  181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                         GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                              DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                           Gaps
                                                                                                                                                                    9
                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [1]
SECURICE, DISULFIDE BONDS, AND ACTIVE SITE.
MEDLINE-67181721; PubMed-5971783;
Brown J.R., Hartley B.S.;
"Location of disulphide bridges by diagonal paper electrophoresis. The disulphide bridges of bovine chymotrypsinogen A.";
Blochem. J. 101:214-228(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-201981nogen A (EC 3.4.21.1).
Bos taurus (Bovine).
Rusaryotas Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidea;
                                                                                                                                                         SEQUENCE, AND DISULFIDE BONDS.
MEDILNE-67183948; PubMed-5972866;
Meloun B., Kluh I., Kostka V., Moravek L., Prusik Z., Vanacek J.,
Keil B., Sorm F.;
                                                                                                           1;
                                                                           DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of
                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-69106266; Pubmed-5764436;
Blow D.M., Birktoft J.J., Hartley B.S.;
"Role of a buried acid group in the mechanism of action
                                               ACAFDBACF8C4DA6D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hartley B.S.;
"Amino-acid sequence of bovine chymotrypsinogen-A.";
Nature 201:1284-1287(1964).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Covalent structure of bovine chymotrypsinogen A."; Biochim. Biophys. Acta 130:543-546(1966).
                                                                Score 781.5; DB 1;
Pred. No. 4.6e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245 AA.
               SIMILARITY.
SIMILARITY.
                                                                                                          40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     240 TSTPAVYSRVTALMPWVQQILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTIVE SITE.
MEDLINE-67181723; PubMed-5971785;
                                                                                                                                                                                                                                                                                                                                                                                   241 IQAPAMYTRVSKFSTWINQVMAYN 264
 BY
BY
BY
                                             27849 MW;
                                                                           55.1%;
53.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smillie L.B., Hartley B.S.;
                                                                                          Local Similarity 53.8 tes 142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 221:337-340(1969).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY SEQUENCE.
154
186
209
263 AA;
                                                                                                                                                                                                                                                                              NCBI_TaxID-9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REVISION TO 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chymotrypsin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTRA_BOVIN
P00766;
DISULFID
                              DISULFID
                                                                             Query Match
                                                                                             Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
CTRA_BOVIN
                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                              121
 FFF 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HERE TERMET TO THE SECTION OF THE SE
                                                                                                                                        ò
                                                                                                                                                                   요
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
"Refined crystal structure of gamma-chymotrypsin at 1.9-A resolution. Comparison with other pancreatic serine proteases.";
J. Mol. Biol. 148:449-479(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF CHYMOTRYPSINOGEN.
MEDLINE=70177557; PubMed=5442169;
Freet S.T., Kraut J., Robertus J.D., Wright H.T., Xuong N.H.;
"Chymotrypsinogen: 2.5-A crystal structure, comparison with alpha-
chymotrypsin, and implications for zymogen activation.";
Biochemistry 9:1997-2009(1970).
                                                                                                       Birktoft J.J., Blow D.M., Henderson R., Steitz T.A.;
"I. Serine proteinases. The structure of alpha-chymotrypsin.";
Philos. Trans. R. Soc. Lond., B, Biol. Sci. 257:67-76(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                     X-RAY CRYSTALLOGRAPHY (1.68 ANGSTROMS) OF ALPHA-CHYMOTRYPSIN
MEDLINE-86011575; Pubmed-4046030;
Tsukada H., Blow D.M.;
                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF GAMMA-CHYMOTRYPSIN.
MEDLINE-82078042; PubMed-6914398;
Cohen G.H., Silverton E.W., Davies D.R.;
sequences in the active centres of some 'serine'
                                                                                      MEDLINE-72035052; PubMed-4399050;
                                Biochem. J. 101:232-241(1966)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2CHA; 31-MAY-84.
4CHA; 29-OCT-85.
5CHA; 16-OCT-87.
6CHA; 16-OCT-87.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4GCH; 15-OCT-90.
5GCH; 15-OCT-90.
6GCH; 15-OCT-90.
7GCH; 15-OCT-90.
8GCH; 15-OCT-90.
                                                                     X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-JUN-94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2CGA; 15-APR-90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-NOV-97
14-JAN-98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -OCT-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-APR-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JAN-84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-AUG-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-APR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A00952;
                proteinases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1CHG;
1CHO;
2GCH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3GCH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1GCT;
2GCT;
3GCT;
1ACB;
1GMC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1GMD;
1CG1;
1CGJ;
1GCD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1GHA;
1GHB;
1GMH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1AFO;
1CAO;
1CBW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2GMT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IMTN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2VGC;
```

```
79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                 MICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWIN 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Pyloric caeca;
MEDLINE-96439045; PubMed-8841380;
Leth-Larsen R., Asgeirsson B., Thorolfsson M., Noerregaard-Madsen M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Pyloric caeca;
MEDLINE-9211252; PubMed-1764912;
MEDLINE-9211252; PubMed-1764912;
Asgeirsson B., Bjarnason J.B.;
"Structural and kinetic properties of chymotrypsin from Atlantic cod (Gadus morhua). Comparison With bovine chymotrypsin.";
Comp. Biochem. Physiol. 998:327-335(1991).
-:- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                       01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsin B (EC 3.4.21.1).
Gadus morhua (Atlantic cod).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Buteleostei; Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
NUBL_TAXID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                           PVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Structure of chymotrypsin variant B from Atlantic cod, Gadus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               iochim. Biophys. Acta 1297:49-56(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-12 AND 16-31
                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                    240 OTLAAN 245
                                                                                                                                                                        259 QVMAYN 264
                                                                                                                                                                                                                                                                          CTRB_GADMO
P80646;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hoejrup P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  morhua.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE.
                                                                                                                                                                                                                                             RESULT 8
CTRB_GADMO
                               61
                                                                                                                 199
                                                                                                                                             g
                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                             HIDDELLAR REPAREMENT OF THE FET THE FE
                                                                                    g
                                                                                                                 ŏ
                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 245;
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001252; CHYMONTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 774.5; DB 1; Leuy...
Pred. No. 1.7e-59;
.....rotches 72; Indels
                                                                                                                                         CHYMOTRYPSIN A, A CHAIN.
CHYMOTRYPSIN A, B CHAIN.
CHYMOTRYPSIN A, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25666 MW; 91A9F28E2F3E3142 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.6%;
57.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 141; Conservative
                                                                                                                                             Similarity
                                                                                                                                3D-structure
                                                                                                                                                                       CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                           DISULFID
DISULFID
DISULFID
HELIX
STRAND
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                           STRAND
STRAND
STRAND
TURN
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                              TURN
STRAND
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAND
TURN
STRAND
TURN
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAND
STRAND
STRAND
HELIX
TURN
HELIX
STRAND
TURN
STRAND
TURN
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
TURN
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAND
STRAND
TURN
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAND
                                                                                                                                               CHAIN
                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TURN
```

1 CGVPAIQPVLSGLSRIVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGV 60 CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV 78

19

a ò

```
[1]
SEQUENCE FROM N.A.
                                                                MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Sim
Matches 118;
                                                                                                                                                                                                               CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                             CONFLICT
                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                      PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                        5,
                                                                                                                                                                              61 RT-YHRVIVGEHDKASD-ENIQILKPSMVFTHPKWDSRTINNDISLIKLASPAVLGTNVS 118
                                                                                                                                                                                                                            PVCLASTNEALPSGLTCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQYWGAR-I 195
                                                                                                                                                                                                                                                               196 TDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFST 255
                                                                                                                                                              79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                                                                                        Gaps
                                                                                                                                     1 CGSPAIQPQVTGYARIVNGEEAVPHSWPWQVSLQQSNGFHFCGGSLINENWVVTAAHCNV 60
                                                                                                               CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Phe-1-Xaa. Hydrolyzes elastin.
-- SUBCELULAR LOCATION: Secreted.
--- TISSUE SPECIFICITY: PANNERS.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -i- FUNCTION: ACTS UPON ELASTIN.
-i- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-87217962; PubMed-3646943;
Kawashima I., Tani T., Shimoda K., Takiguchi Y.;
Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are expressed in human pancreas.";
DNA 6:163-172(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-88198076; Pubwed-2834346;
Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N.,
Shimada Y., Ozawa T., Mikayama T., Iijima H., Ishida A., Sato Y.,
Tamai Y., Tanaka J., Ikenaga H.;
Molecular cloning and expression in Escherichia coli of a cDNA
encoding human pancreatic clastase 2.";
J. Blochem. 102:1555-1563(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
NCBL_TaxID=9823;
                                                              DB 1; Length 245;
                                                                                        Indels
QVT -> VIS (IN REF. 2).
S -> T (IN REF. 2).
PW -> Y (IN REF. 2).
74FE0D425517AB02 CRC64;
                                                                                        63;
                                                             Query Match 52.8%; Score 748.5; DB 1
Best Local Similarity 54.6%; Pred. No. 2.9e-57;
Matches 136; Conservative 43; Mismatches 63
                                                                                                                                                                                                                                                                                                                                                                                                                             01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
01-AUG-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
 11
26
29
26260 MW;
                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
 9
26
28
245 AA;
                                                                                                                                                                                                                                                                                                                                        WVDQILAAN 245
                                                                                                                                                                                                                                                                                                                 256 WINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           scrofa (Pig).
                         CONFLICT
              CONFLICT
  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                     EL2_PIG
                                                                                                               19
                                                                                                                                                                                                               139
                                                                                                                                                                                                                                                                                                                                        237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sus
                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
  FFFS
                                                                                                                                       셤
                                                                                                                                                                                     요
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                 ò
```

```
59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 N--NDLFLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26
                                                                                                                                                                                                                                                                                                               SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92; Indels
                                                                                                                                                                                                                                                                                        ELASTAGE 2.

CHARGE RELAY SYSTEM (BY SIM. CHARGE RELAY SYSTEM (BY SIM. CHARGE RELAY SYSTEM (BY SIM. BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

C -> S (IN REF. 2).

N -> K (IN REF. 2).

S -> Y (IN REF. 2).

S -> Y (IN REF. 2).

C -> V (IN REF. 2).

C -> V (IN REF. 2).

C -> V (IN REF. 2).

W; BACGFE69AF4DDE56 CRC64;
                                                                                                                                                                                                                                                                             ACTIVATION PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        n 37.9%; Score 537; DB 1; Similarity 43.1%; Pred. No. 4.5e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DE EL2_BOVIN

1D EL2_BOVIN STANDARD; PRT; 269 AA.

AC 029461.

DT 01-NOV-1997 (Rel. 35, Last sequence update)

DT 15-JUN-2002 (Rel. 41, Last annotation update)

DF Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                            SWART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Zymogen; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                236 SFGSSLGCNYYHKPSVFTRVSNYIDWINSVIANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                    Interpro; IPR001314; Chymotrypsin.
Interpro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                                                                                                            Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28699 MW;
 . .
EMBL; M16651; AAA31027.1;
EMBL; D00237; BAA00166.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bovidae; Bovinae; Bos.
                                  PIR; A26823; A26823.
HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                          Bos taurus (Bovine)
```

11;

271 AA

PRT;

STANDARD;

```
pancreas.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                     between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
              119 --NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117 AQGNDIALLKLASSVPLTDKIQLGCLPAAGTILPNNYVCYVTGWGRLQSNG-ALPDILQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH 58
                                                                                                                                                                                                                                                                                                                                                 SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177 VVLPLVTVNQCR--QYWGARITDAMICAGGSG-ASSCQGDSGGPLVCQKGN-TWVLIGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                                                                                   36.7%; Score 520; DB 1; Length 269; 42.0%; Pred. No. 1.3e-37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     98; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 8343B97062CF267C CRC64;
                                                                                                                                                                                                                                                                                                                                                 (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                               CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Pred. No. 1.3e
45; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          233 SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY.
SIMILARITY.
        MEDLINE=98079203; PubMed=9418008
                                                                                                                                                                                                                                                                                                                                                                                                                  28856 MW;
                                                                                                                                                                                                       EMBL; X97635; CAA66231.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 115; Conservative
                                                                                                                                                                                                                                                                                                                      16
28
269
73
121
216
74
                                                                                                                                                                                                                                                                                                                                                                                                                269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                           MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                               17
29
29
73
73
121
216
58
155
186
212
                                                                                                                                                                                                                                                                                                                                       CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
```

RESULT 11 EL2_RAT

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                     J. Biol. Chem. 259:14271-14278(1984).
-!- FUNCTION: ACTS UPON ELASTIN.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and Phe-1-Xaa. Hydrolyzes elastin.
-!- SUBCELULAR LOCATION: Secreted.
-!- TISSUE SPECIFUCITY: PANCREAS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                         "Primary structure of two distinct rat pancreatic preproelastases determined by sequence analysis of the complete cloned messenger ribonucleic acid sequences.";
                                                                                                                                                                                                                                                                                                                                                                                         rat
                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE=85054882; PubMed=6094548;
Swift G.H., Craik C.S., Stary S.J., Quinto C., Lahaie R.G.,
Rutter W.J., Macdonald R.J.;
"Structure of the two related elastase genes expressed in the
                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE-82182967; PubMed-6918221;
McDonald R.J., Swift G.H., Quinto C., Swain W., Pictet R.L.,
Nikovits W., Rutter W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTIVATION PEPTIDE.
                           21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
12-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hydrolase; Serine protease; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELASTASE 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOINED.
JOINED.
JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS, PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240, TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V0123; V010124; AAA98780.1; -
L00118; AAA98780.1; JOINED.
IO0119: AAA98780.1; JOINED.
                                                                                                                                                                                                                                                                                               Biochemistry 21:1453-1463(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; V01233; CAA24543.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; L00119; AAA98780.1; JURBL; L00120; AAA98780.1; JURBL; L00120; AAA98780.1; JURBL; L00121; AAA98780.1; JURBL; L00123; AAA98780.1; JURBL; L00123; AAA98780.1; JURSP; P00772; LERG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00089; trypsin;
                                                                                                         Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
75
123
218
218
224
245
                                                                                                                                         Mammalia; Euther1
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
DISULFID
DISULFID
```

```
EL3B_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROPEP
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
EL3B_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236
    SO DE LA PRESENTA DEL PRESENTA DE LA PRESENTA DEL PRESENTA DE LA PRESENTA DEL PRESENTA DE LA PRESENTA DE LA PRESENTA DE LA PRESENTA DE LA PRESENTA DEL PRESENTA DE LA PRESE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                       11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
TISSUE-Pancreas;
MEDLINE-88198076; PubMed-2834346;
Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N., Shimada Y.,
Ozawa T., Mikayama T., Iljima H., Ishida A., Sato Y., Tamai Y.,
                                                                                                                                                                                                                                                                                                                                         118 LSNGNDIALVKLASPVALTSKIQTACLPPAGTILPNNYPCYVTGWGRLQTNG-ATPDVLQ 176
                                                                                                                                                                                                                                                                                                                                                                                   176 QVVLPLVTVNQC--RQYWGARITDAMICAGGSG-ASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                              118 MN--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQ 175
                                                                                       Gaps
                                                                                                                                                                                                              HFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANT 117
                                                                                                                                                      2 LLLSLTLSLVLLGSSWGCGVPAITPALSYN-QRIVNGENAVPGSWPWQVSLQ---DNTGF 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-87217962; PubMed-3646943;
Kawashima I., Tani T., Shimoda K., Takiguchi Y.;
Characterization of pancreatic elastase II cDNAs: two elastase II
mRNAs are expressed in human pancreas.";
DNA 6:163-172(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE-88107669; PubMed-3427074;
Fletcher T.S., Shen W.F., Largman C.;
Primary structure of human pancreatic elastase 2 determined by sequence analysis of the cloned mRNA.";
Biochemistry 26:7256-7261(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tanaka J., Ikenaga H.;
"Molecular cloning and expression in Escherichia coli of a cDNA
encoding human creatic elastase 2.";
J. Biochem. 102:1555-1563(1987).
                                            Length 271;
                                                                                     100; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases
-1- FUNCTION: ACTS UPON ELASTIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to the EMBL/GenBank/DDBJ databases
125C783B857B71E3 CRC64;
                                        36.5%; Score 517; DB 1;
41.1%; Pred. No. 2.4e-37;
iive 46; Mismatches 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EL2A_HUMAN STANDARD; PRT; 269 AA. P08217; 014243; P014313; P014313; P01-MUG-1988 (Rel. 08, Last sequence update) 115-JUN-2002 (Rel. 41, Last annotation update) 115-JUN-2002 (Rel. 41, Last annotation update) Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 232 VSWG-TKNCNI-QAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Primates;
28885 MW;
                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (JUN-2001)
271 AA;
                                                            Local Similarity
es 113; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rissue-pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
  SEQUENCE
                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EL2A_HUMAN
                                                                                  Matches
                                                                                                                                                                                                              28
  တ္တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                      윱
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics. Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modifiad and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGRLQTNGAV-PDVLQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177 VVLPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIV 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
C -> V (IN REF. 3).
C -> V (IN REF. 3).
  cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                          S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTIVATION PEPTIDE.
ELASTASE 2A.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 515; DB 1;
Pred. No. 3.5e-37;
                   and Phe-1-Xaa. Hydrolyzes elastin.
--- SUGEELLULAR LOGATION: Secreted.
--- TISSUE SPECIFICITY: PANCREAS.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hydrolase; Serine protease; 2ymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233 SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |:|:: || |::|| |::|||| SFGSRLGCNYYHKPSVFTRVSNYIDWINSVIANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ser_protease_Try.
in; 1.
  Preferential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001254; Ser_protease_Tr
Pfam; PF00089; trypsin; I.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; I.
PR0SITE; PS0240; TRYPSIN_DOM; I.
PR0SITE; PS00134; TRYPSIN_HIS; I.
PR0SITE; PS00135; TRYPSIN_HIS; I.
                                                                                                                                                                                                                                                                                                                 EMBL; M16631; AAA52374.1; --
EMBL; M16652; AAA52380.1; --
EMBL; D00236; BAA00165.1; --
EMBL; AL512883; CAC42421.1; --
EMBL; BC007031; AAH07031.1; --
PIR; B26823; B26823.
HSSP; P00772; IELG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28888 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .36.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 114; Conservative
CATALYTIC ACTIVITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
202
243
73
121
216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACT_SITE
CONFLICT
```

A.

270

PRT;

STANDARD;

```
Genew; HGNC:15945; ELA3B.
                                                                                                                                                                   CHAIN
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Pancreas; MEDLINE-8928996; PubMed-2737288; Wendorf P., Geyer R., Sziegoleit A., Linder D.; "Localization and characterization of the glycosylation site of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrolyse elastin.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
--- CAUTION: Was originally (Ref.5) thought to be elastase 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pancreatic elastase 1.";
FEBS Lett. 249:275-278(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LITTLE ELASTOLYTIC ACTIVITY.
                                                                                               Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                        Shen W., Fletcher T.S., Largman C.; "Primary structure of human pancreatic protease E determined by sequence analysis of the cloned mRNA."; Biochemistry 26:3447-3452(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Pancreas;
MEDLINE-89325560; PubMed-2753124;
Moulard M., Kerfelec B., Mallet B., Chapus C.;
Identification of a procarboxypeptidase A-truncated protease binary complex in human pancreatic juice.";
FEBS Lett. 250:166-170(1989).
                                                                                                                                                                TISSUE-Pancreas;
MEDLINE-88097253; PubMed=2826474;
MEDLINE-80907253; PubMed=2826474;
Tani T., Ohsumi J., Mita K., Takiguchi Y.;
Tidentification of a novel class of elastase isozyme, human pancreatic elastase III, by cDNA and genomic gene cloning.";
J. Biol. Chem. 263:1231-1239(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 94-164, AND CARBOHYDRATE-LINKAGE SITES ASN-114
                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                             Strausberg R.; Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
             01-NOV-1988 (Rel. 09, Created)
16-CT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase IIIB precursor (EC 3.4.21.70) (Protease E).
                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-88000545; PubMed-3477287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; BC005216; AAH05216.1; -. EMBL; M18692; AAA58454.1; -. PIR; B29934; B29934.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M16630; AAA36482.1; -.
EMBL; BC005216; AAH05216.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlycoSuiteDB; P08861; -. SWISS-2DPAGE; P08861; HUMAN.
                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 4-270 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR; S04490; S04490.
HSSP; P05805; 1FON.
                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; S04999; S04999.
                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 31-50.
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; S01.205;
                                                                                                                                                                                                                                                                                   TISSUE-Pancreas;
                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                     TISSUE-Pancreas;
```

```
59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNAN 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57 TCGGSLIAPDWVVTAGHCISSSWTYQVVLGEYDRAVKEGPEQVIPINSGDLFVHPLWNRS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175 QQVVLPLVTVNQCRQ--YWGARITDAMICAGGSGASSCQGDSGGPLVC-QKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117 TM--NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARL 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-Droptoteinase E precursor (Procarboxypeptidase A complex component III) (Procarboxypeptidase A-56 subunit III) (PROCPA-56 III).
Bos taurus (Bovine).
                                                                                                                                                                                                             SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117 CVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNETPCYITGWGRLYTNGPL-PDKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-25.
MEDLINE-91099520; PubMed-2269366;
Pascual R., Vendrell J., Aviles F.X., Bonicel J., Wicker C.,
                                                                                                                                                             OR 16 (POTENTIAL).
ACTIVATION PEPTIDE (POTENTIAL).
                                                                                                                                              Hydrolase; Serine protease; Zymogen; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                              EXISTANCE STATEMENTY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. ..).
/FIGHCAR_000212.
R -> G (IN REF. 3).
W -> R (IN REF. 1).
MISSING (IN REF. 3).
MISSING (IN REF. 3).
K -> P (IN REF. 3).
W; B14BE0AAD3695AFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                               (BY
(BY
(BY
                                                                                                                                                                                                           CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36.2%; Score 513.5; DB 1
41.4%; Pred. No. 4.7e-37;
tive 46; Mismatches 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253 AA
                                                                                                                                                                                                                                                                   BY SIMILARITY.
                                                                                                                                                                                               ELASTASE IIIB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              232 VSW-GTKNCNI-QAPAMYTRVSKFSTWINQVMA 262
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; PR0089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PR0SITE; PS50240, TRYPSIN_DOM, 1.
PROSITE; PS00114; TRYPSIN_HIS; 1.
PROSITE; PS001135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                    PROBABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          164 R
29293 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1988 (Rel. 09, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ilarity 41.4%;
Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                       64
79
131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity
Matches 113; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                    157
188
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAC3_BOVIN
P05805;
                                                                                                                                                                                                               ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                    DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                PROPEP
                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAC3_BOVIN
```

10;

三年 三年

```
.;
œ
       "Autolysis of proproteinase E in bovine procarboxypeptidase A ternary complex gives rise to subunit III."; FEBS Lett. 277:37-41(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69 GEYDRSVLEGSEQVIPINAGDLFVHPLWNSNCVACGNDIALVKLSRSAGLGDKVQLANLP 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129 PAGDILPNEAPCYISGWGRLY-TGGPLPDKLQQALLPVVDYEHCSQWDWWGITVKKTMVC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGSGASSCQGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-1QAPAMYTRVSKFSTWIN 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GEYDRS--SNAEPVQVLSIARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLA 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     144 STNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMIC 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SRVVNGEDAVPYSWSWQVSLQYEKDGAFHHTCGGSLIAPDWVVTAGHCISTSRTYQVVL 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31 NQRIVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVL 87
                                                                                                                                                                                                                                                                            A MEMOUS; SUL.2003, -...
A InterPro; IPR001314; Chymotrypsin.
A InterPro; IPR001314; Ser_protease_Try.
R PRINTS; PR00722, CHYMOTRYPSIN.
R SMART; SM00020; TryP_SPC; 1.
R PROSITE; PS50240; TRYPSIN_LOM; 1.
R PROSITE; PS00134; TRYPSIN_LOM; 1.
R PROSITE; PS00135; TRYPSIN_LES; 1.
R PROSITE; PS00135; TRYPSIN_SER; 1.
R PROSITE; PS00135; TRYPSIN_SER; 1.
R PROSITE; PS00135; TRYPSIN_SER; 1.
R PROPEP 1 1 ACTIVAȚION PEPTIDE.
T CHAIN 12 253 PROPROTEINASE E.
                                        MEDLINE-86220198; PubMed-3519215;
Venot N., Sciaky M., Puigserver A., Desnuelle P., Laurent G.;
*Amino acid sequence and disulfide bridges of subunit III, a
defective endopeptidase present in the bovine pancreatic 6 S
procarboxypeptidase A complex.";
Eur. J. Blochem. 157:91-99(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               89; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            27337 MW; 24663724D8AE409C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                             35.5%; Score 503.5; DB 1
43.5%; Pred. No. 3.1e-36;
tive 37; Mismatches 89
                                                                                                                                                                                                                            -i- SUBCELLULAR LOCATION: EXTRACEllular.
-i- TISSUE SPECIFICITY: PANCRESS.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY PIR; A25065; CPBOA3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                        253
57
103
206
187
                                                                                                                                                                                                                     CHYMOTRYPSINGEN C
                                                                                                                                                                                                                                                                 1FON; 14-OCT-96.
                                                                                                                                                                                                                                                                         MEROPS; S01.983; -.
                                                                                                                                                                                                                                                                                                                                                                                                                           253 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7::| |
248 ETIASN 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Sim
Matches 107;
                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tomomura A., Akiyama M., Itoh H., Yoshino I., Tomomura M., Nishii Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTIVITY.
--- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Tyr-|-Xaa, Phe-|-Xaa, Met-|-Xaa, Trp-|-Xaa, Gln-|-Xaa, Asn-|-Xaa.
--- TISSUE SPECIFICITY: PANCREMS.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-98207038; PubMed-9538241;
Yoshino-Yasuda I., Kobayashi K., Akiyama M., Itoh H., Tomomura A.,
                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "A human pancreatic chymotrypsin: biochemical and molecular characterization.";
Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Noikura T., Saheki T.;
"Molecular cloning and expression of human caldecrin.";
FEBS Lett. 386:26-28(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                      099895; Q9NUH5; 000765;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Caldecrin precursor (EC 3.4.21.2) (Chymotrypsin C).
CTRC OR CLCR
HOMO sapiens (Human).
268 AA
                                                                                                                                                                                                                                                                                                                                    [1]
SEQUENCE FROM N.A., AND VARIANT TRP-80.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
PRT;
                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Pancreas;
MEDLINE-96221265; PubMed-8635596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; S82198; AAB47104.2; ALT_SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AL031283; CAB77355.1;
EMBL; Y13697; CAA74031.1; -.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 17-268 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; S01.157; -.
HGNC:2523; CTRC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Noikura T., Saheki T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sziegoleit A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MIM; 601405;
CLCR_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew;
```

# Hydrolase; Serine protease; Glycoprotein; Zymogen; Signal;

```
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYD-RSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVV 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           179 LPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIVSW 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ---DNTGFHF 59
                                                                         POTENTIAL.

ACTIVATION PEPTIDE.
CALDECRIN.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 34.9%; Score 495.5; DB 1; Length 268; Best Local Similarity 40.1%; Pred. No. 1.6e-35; Matches 108; Conservative 46; Mismatches 102; Indels 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                235 GT-KNCNI-QAPAMYTRVSKFSTWINQVM 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16 S
52 N
29484 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202
243
25
25
52
80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16
52
268 AA;
                                       Polymorphism.
SIGNAL
PROPE
CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
CARBOH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
CONFLICT
SEQUENCE
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
```

Search completed: December 20, 2002, 15:17:13 Job time : 10.0435 secs

```
December 20, 2002, 15:14:28; Search time 16.6957 Seconds (without alignments) 1520.126 Million cell updates/sec
                                                                                                                                                                                                 US-09-856-319B-4
1418
1 MLLLSLTLSLVLLGSSWGCG......AMYTRVSKFSTWINQVMAYN 264
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                 283224 seqs, 96134422 residues
                                                                              - protein search, using sw model
                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                OM protein
                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                 Sequence:
                                                                                                                        Run on:
                                                                                                                                                                                                     Title:
```

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* PIR_73:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

chymotrypsin-like
chymotrypsin (EC 3
chymotratic elastas
pancreatic elastas plasmin (EC 3.4.21 plasmin (EC 3.4.21 pancreatic elastas chymotrypsin-like plasmin (EC 3.4.21 plasmin (EC 3.4.21 plasmin (EC 3.4.21 tryptase (EC 3.4.2 prostasin (EC 3.4.2 plasmin (EC 3.4.2) Description SUMMARIES 138136 A211995 A211995 A211995 S47537 KYRDB KYRDB A268219 B26823 B26823 B26823 B26823 CP8023 A26826 A26826 A26826 A26826 A26823 A2782 A278 Query Match Length DB Result . No. Score 1269 832.5 822.5 798.5 786.5 781.5 737 513.5 495.5 495.5 492.4 485.5 485.5 484 

RESULT 2 A21195

trypsin (EC 3.4.21 pancreatic elastas	LIYPSIN (EC 3.4.21 tryptase (EC 3.4.2 pancreatic elastas trypsin (EC 3.4.21	tryptase (EC 3.4.2 plasmin (EC 3.4.21	trypsin (EC 3.4.21 plasmin (EC 3.4.21	serine proteinease trypsin (EC 3.4.21 mast cell proteina	apoprotein(a) (EC enteropeptidase (E apolipoprotein(a)
TRRT1 JO1473	JAFGIA JC4171 ELRT1 TRRT2	A32410 146260	TRDGC PLBO	A4/54/ TRDG A38654	S00657 A43090 A32869
7 7 7	1011	00		7 7	777
246 268	274 266 266	275	246	786 247 276	4548 1035 1420
32.1	31.4	31.3	31.2	31.1	31.1 31.0 31.0
454.5	444	443.5	442.5	441 440.5 440.5	440.5 439.5 439
30	3 8 8 8 3 8 4 8	36	388	4 4 4 0 1 2	444 544 5

## ALIGNMENTS

ö

```
C.Species: Gadus morrhua (Atlantic cod)
C.Date: 26-Dec-1994 #sequence_revision 03-Aug-1995 #text_change 22-Jun-1999
C.Date: 26-Dec-1994 #sequence_revision 03-Aug-1995 #text_change 22-Jun-1999
C.Accession: 847537; 843163
R.Gudmundsdottir, A.; Oskarsson, S.; Eakin, A.E.; Craik, C.S.; Bjarnason, J.B.
Biochim. Biophys. Acta 1219, 211-214, 1994
A.Title: Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.
A.Reference number: 847537; MUID:9436860; PMID:8086467
A.Accession: 847537; MUID:9436860; PMID:8086467
A.Accession: 847537; MUID:9436860; PIDN:CAA55242.1; PID:9468751
C.Superfamily: trype:in homology
C.Superfamily: trypsin predicted <a href="Mailto:AMA">Mailto:AMA</a>
F.19-263/Product: Chymotrypsin #status predicted <a href="Mailto:AMA">Mailto:AMA</a>
F.34-256/Domain: trypsin homology <a href="Mailto:AMA">Mailto:AMA</a>
F.34-256/Domain: trypsin homology <a href="Mailto:AMA">Mailto:AMA</a>
F.34-256/Domain: trypsin homology <a href="Mailto:AMA">Mailto:AMA</a>
F.35-120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chymotrypsin (EC 3.4.21.1) B precursor - bovine
N;Alternate names: chymotrypsinogen B
C;Species: Bos primigenius taurus (cattle)
C;Bate: 08-0ct-1981 #sequence_revision 08-oct-1981 #text_change 18-Jul-1997
C;Accession: A00953
R;Smillie, L.B.; Furka, A.; Nagabhushan, N.; Stevenson, K.J.; Parkes, C.O.
                                                                                                     GGSLISEDWVVTAAHCGVRTS-DVVVAGEFDOGSDEENIOVLKIAKVFKNPKFSILTVNN 119
                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                            72 TAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           132 RYTAQVSPVCLASTNEALPSGLICVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYW 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192 GARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVS 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 LFRRIYGCGRPAISPVITGYSRIVNGEEAVPHSWSWQVSLQDQTGFHFCGGSLINENWVV 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 LLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVV 71
                                                                                                                                                                                                                       1 MAFLWLLSCWALLGTTFGCGVPAIHPVLSGLSRIVNGEDAVPGSWPWQVSLQDKTGFHFC
                                                                      DITILKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP
                                                                                                                                                                                                                                                                                                          LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 56.3%; Score 798.5; DB 2; Best Local Similarity 56.9%; Pred. No. 8.8e-59; Matches 144; Conservative 38; Mismatches 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          precursor - Atlantic cod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ELRAWVDQTIAAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chymotrypsin (EC 3.4.21.1)
                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
                                                                      61
                                                                                                                              61
                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KYBOB
                                                                      ò
                                                                                                                           q
                                                                                                                                                                                        δ
                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             С
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
chymotrypsin (EC 3.4.21.1) 2 precursor - dog
C;Species: Canis lupus familiaris (dog)
C;Species: Canis lupus familiaris (dog)
C;Date: 27-Jul-1990 #sequence_revision 27-Jul-1990 #text_change 22-Jun-1999
C;Accession: A21195
R;Pinsky, S.D.; LaForge, K.S.; Luc, V.; Scheele, G.
Proc. Natl. Acad. Sci. U.S.A. 80, 7486-7490, 1983
A;Title: Identification of cDNA clones encoding secretory isoenzyme forms: sequence dete A;Reference number: A21195; MUID:84170253; PMID:5584866
A;Accession: A21195
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-263 APIN>
A;Residues: 1-263 APIN>
A;Residues: 1-263 APIN>
A;Cross-references: GB:KO1173; NID:9163945; PIDN:AAA30841.1; PID:9163946
C;Superfamily: trypsin homology
C;Superfamily: trypsin; trypsin homology
C;Stywords: hydrolase; protein digestion; serine proteinase
F;34-256/Domain: trypsin homology <TRX>
F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Species: Homo sapiens: (man)
C; Species: Homo sapiens: (man)
C; Species: Homo sapiens: (man)
C; Date: 08-Jun-1989 #sequence_revision 08-Jun-1989 #text_change 22-Jun-1999
C; Accession: A31299
R; Tomita, N.; Izumoto, Y.; Horii, A.; Doi, S.; Yokouchi, H.; Ogawa, M.; Mori, T.; Matsub Biochem. Biophys. Res. Commun. 158, 569-575, 1989
A; Title: Molecular cloning and nucleotide sequence of human pancreatic prechymotrypsinog A; Reference number: A31299; MUID:89134264; PMID:2917002
                                                                                                                                                                                           dete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 GGSLISEDWVYAAAHCGVRT-THQVVAGEFDQGSDAESIQVLKIAKVFKNPKFNNFTINN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 DITLLKLATPARFSKTVSAVCLPQATDDFPAGTLCVTTGWGLTKHTNANTPDKLQQAALP 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A:Cross-references: GB:M24400; NID:g181189; PIDN:AAA52128.1; PID:g181190
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.0%; Score 822.5; DB 2; Length 57.2%; Pred. No. 9.1e-61; ive 38; Mismatches 74; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross.references: GDB:119820; OMIM:118890
A;Map position: 16q23.1-16q23.1
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; protein digestion; serine proteinase
F;34-256,Domain: trypsin homology C;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.7%; Score 832.5; DB 2 57.2%; Pred. No. 1.3e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chymotrypsin (EC 3.4.21.1) precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | :| ||:| |: | TSTPGVYARVTKLIPWVQQILQAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 57.2%
Matches 151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 57.29
Matches 151; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-263 <TOM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene: GDB:CTRB1; CTRB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
```

ò g à g g

ò

g

ò

ò

THE PERSON NAMED IN

ò

ij

```
GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                   241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                            240 ISTPAVYSRVTALMPWVQQILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A90235
                                                                                                                                                                                 120
           61
                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
                                                              g
                                                                                                                         ò
                                                                                                                                                                           셤
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                      g
A;Title: Structure of chymotrypsinogen B compared with chymotrypsinogen A and trypsinogen A;Reference number: A00953; MUD: 68238908; PMID: 5649671
A;Reference number: A00953; MUD: 68238908; PMID: 5649671
A;Reference number: A00953; MUD: 68238908; PMID: 5649671
A;Residues: 10.245 <SMID>
C;Comment: D;Pe: protein
A;Residues: 1-245 <SMID>
C;Comment: Chymotrypsinogen B.is synthesized, along with chymotrypsinogen A, in the acin C;Comment: The first activation cleavage, leading to pi-chymotrypsin B, occurs in the sa C;Superfamily: trypsin homology
C;Superfamily: trypsin trypsin homology
C;Reywords: hydrolase; pnorteas; protein digestion; serine proteinase; zymogen
F;16-2345/Product: chymotrypsin B #status experimental <PRO>
F;16-2345/Domain: trypsin homology <PROPERIMENTAL <PRO>
F;16-2345/Domain: trypsin homology <PROPERIMENTAL </pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;)Spectas: Mattus norvegicus (Norway rat)
C;)Spectas: Mattus norvegicus (Norway rat)
C;)Accession: A22658
R; Bell, G.I.; Oulnto, C.; Oulroga, M.; Valenzuela, P.; Cralk, C.S.; Rutter, W.J.
J. Biol. Chem. 259, 14265-14270, 1984
A;Title: Isolation and sequence of a rat chymotrypsin B gene.
A;Reference number: A22658; MUD:85054881; PMID:6209274
A;Recersion: A22658; MUD:85054881; PMID:6209274
A;Accession: A22658; MUD:85054881; PMID:6209274
A;Accession: A22658
A;Molecule type: DNA
A;Residues: 1-263 <BELD
A;Cross-references: GB:K02298; NID:9203653; PIDN:AAA98732.1; PID:9203654
C;Genetics:
A;Introns: 1871; 5273; 7922; 105/3; 166/1; 210/3
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; pancreas; protein digestion; serine proteinase
F;1-187Domain: signal sequence #status predicted <BIO>
F;34-263/Product: chymotrypsin B #status predicted <AMT>
F;34-256/Domain: trypsin homology <TRYP
F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120 AVCLPSADEDFPAGMLCATTGWGKTKYNALKTPDKLQQATLPIVSNTDCRKYWGSRVTDV 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWIN 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19 CGVPAITPALSYNORIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVTAAHCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                   245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81;
                                                                                                                                                                                                                                                                                                                                                                                                                             55.5%; Score 786.5; DB 1;
11arity 57.7%; Pred. No. 8e-58;
Conservative 32; Mismatches 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.1%; Score 781.5; DB 353.8%; Pred. No. 2.2e-57.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chymotrypsin (EC 3.4.21.1) B precursor - rat
N;Alternate names: chymotrypsinogen B
C;Species: Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match
Best Local Similarity 53.8 Matches 142; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 142; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : :| |
ETLAAN 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         259 QVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
```

```
R;Cutruzzola, F.; Ascenzi, P.; Barra, D.; Bolognesi, M.; Menegatti, E.; Sarti, P.; Sc Blochim. Blophys. Acta 1161, 201-208, 1993
A;Title: Selective oxidation of Met-192 in bovine alpha-chymotrypsin. Effect on catal A;Reference number: $29650; MuID:93160238; PMID:8431470
A;Reference number: $29650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Comment: Chymotrypsinogens are synthesized in the acinar cells of pancreas C;Comment: Tryptic cleavage after Arg-15 results in a fully active enzyme (pl-chymotr C;Comment: Tryptic cleavage after Arg-15 results in a fully active enzyme (pl-chymotr clear-chymotrypsin); further chymotryptic cleavage liberates the dipeptide Thr-147 and Asn-148 directly from chymotrypsinogen, which leads to the degraded form neochymotr C;Superfamily: trypsin trypsin homology
C;Keywords: hydrolase; pancreas; protein digestion; serine proteinase; zymogen
F;1-245/Product; chymotrypsinogen #status experimental <2YM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Title: Location of disulphide bridges by diagonal paper electrophoresis. The disulp A;Reference number: A90235; MUID:67181721; PMID:5971783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Z.; Vanacek, J.; Keil, B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A Molecule type: protein
A;Residues: 1-12;16-27;149-160;181-200 <CUT>
R;Smillie, L.B.; Hartley, B.S.
Biochem. J. 101, 232-241, 1966
A;Title: Histidine sequences.in the active centres of some 'serine' proteinases. A;Reference number: A90236; MUID: 67181723; PMID:5971785
A;Contents: annotation; active site
R;Birktoft, J.J.; Blow, D.M.; Henderson, R.; Steltz, T.A.
Philos. Trans. R. Soc. Lond. B257, 67-76, 1970
A;Title: The structure of alpha-chymotrypsin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 action of chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chymotrypsin (EC 3.4.21.1) A precursor - bovine
NiAlternate names: chymotrypsinogen A C. Species: Bos primigenius taurus (cattle)
C;Species: Bos primigenius taurus (cattle)
C;Date: 07-May-1981 #sequence_revision 07-May-1981 #text_change 07-May-1999
C;Accession: A90235, A91368; S29650; A00952
Biochem. J. R.; Hartley, B. S.
Biochem. J. 101, 214-228, 1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;16-238/Domain: trypsin homology <TRY>
F;1-122,42-58,136-201,168-182,191-220/Disulfide bonds: #status experimental
F;57,102,195/Active site: His, Asp, Ser #status experimental
61 GGSLISEDWVVAAAHCGVKTS-DVVVAGEFDQGSDEENIQVLKIAQVFKNPKFNMFTVRN 119
                                                                                                                                       180
                                                                                                                                                                                       181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                          DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;1-13,16-146,149-245/Product: alpha-chymotrypsin #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein
A; Molecule type: protein
A; Residues: 1-101, N', 103-245 < BRO>
R; Blow, D.M.; Birktoft, J.J.; Hartley, B.S.
R; Blow, D.M.; Birktoft, J.J.; Hartley, B.S.
N; Birkerence number: A93158; MID:65106266; PMID:5764436
A; Contents: annotation; revision to residue 102
R; Meloun, B.; Kluh, I.; Kostka, V.; Moravek, L.; Prusik, Z.;
Biochim. Blophys. Acta 130, 543-546, 1966
A; Title: Covalent structure of bovine chymotrypsinogen A; Reference number: A90572; MID:67183948; PMID:5972866
A; Molecule type: protein
A; Residues: 1-101, N', 103-245 < MEL>
A; Note: disulfide bonds were determined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: A93754
A;Contents: annotation; X-ray crystallography
```

6/2

elastase II mRNAs are

11;

16;

28 26

```
puncteatic elastase II (EC 3.4.21.71) precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus
C;Species: Rattus norvegicus
C;Species: Rattus norvegicus
C;Accession: A00961
R;MacDonald, R.J.; Swift, G.H.; Quinto, C.; Swain, W.; Pictet, R.L.; Nikovits, W.; Ru
Biochemistry 21, 1433-1463, 1982
A;Title: Primary structure of two distinct rat pancreatic preproelastases determined
A;Reference number: A00960, MUD:82182967; PMID:691821
A;Molecule type: mRNA
A;Residues: 1-271 cMAC>
A;Cross-references: GB:L00124; GB:J00731; NID:g204019; PIDN:AA98780.1; PID:g204021
C;Superfamily: trypsin homology
C;Keywords: hydrolase; pancreas; serine prodicted <SIG>
F;J1-16/Domain: signal sequence #status predicted <APT>
F;J1-20/Domain: activation peptide #status predicted <APT>
F;J1-264/Domain: trypsin homology cTRX>
F;J1-264/Domain: trypsin homology cTRX>
F;J1-264/Domain: trypsin homology cTRX>
F;J1-213,218/Active site: His, Asp, Ser #status predicted
                                             R.Kawashima, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
DNA 6, 163-172, 1987
A;Title: Characterization of pancreatic elastase II cDNAs: two elastase II mR
A;Reference number: A90958; MUID:87217962; PMID:3646943
A;Accession: A26823
A;Accession: A26823
A;Residues: 1-269 < KAMA
A;Residues: 1-269 < KAMA
A;Residues: 1-269 < KAMA
A;Residues: 1-269 < KAMA
C;Superfamily: trypsin homology
C;Superfamily: trypsin, trypsin homology
C;Keywords: hydolase; serine proteinase
F;1-16/Domain: signal sequence #status predicted <SIG>F;1-28/Domain: propeptide #status predicted <PRO>F;1-28/Domain: trypsin homology <R:29-269/Product: elastase II #status predicted <MAT>F;29-269/Product: elastase II #status predicted <AMAT>F;29-269/Domain: trypsin homology <ARY>F;31-21,216/Active site: His, Asp, Ser #status predicted
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 22-Jun-1999
C;Accession: A26823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117 SNGNDIALLKLASPVSLTDKIQLGCLPAAGTILPNNYVCYVTGWGRLQTNG-ASPDILQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLLSLTLSLVLLGSSWGCGVPAITPALSYN-QRIVNGENAVPGSWPWQVSLQ---DNTGF 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177 VVLPLVTVNQCRQ--YWGARITDAMICAGGSG-ASSCQGDSGGPLVCQKGN-TWVLIGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 37.9%; Score 537; DB 2; Length Best Local Similarity 43.1%; Pred. No. 4e-37; Matches 118; Conservative 48; Mismatches 92; Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36.5%; Score 517; DB 1; Length 41.1%; Pred. No. 1.8e-35; ative 46; Mismatches 100; Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   233 SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Д.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chymotrypsin B - Atlantic cod (fragments)

(S)Species: Gadus morhua (Atlantic cod)

(S)Species: Gadus morhua (Atlantic cod)

(C)Bate: 19-War-1998 #sequence_revision 17-Apr-1998 #text_change 07-Aug-1998

(C)Accession: S7219 #sequescop. B.; ThoronCisson, M.; Norregaard-Madsen, M.; Hojrup, Richth-tarsen, R.; Asgeirsson, B.; ThoronCisson, M.; Norregaard-Madsen, M.; Hojrup, Blochim. Blophys. Acta 1297, 49-56, 1996

A;Title: Structure of chymotrypsin variant B from Atlantic cod, Gadus morhua. A;Reference number: S72219; MUID:96439045; PMID:8841380

A;Accession: S72219

A;Status: preliminary
                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
9
                                                                                                                                                                                                                                                                    TIS-DVVVAGEEDQGSSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                                                                                                                                                                                                                                                                                                                                          PVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDA 198
                                                                                                                                                                                                                                                                                                                                                                       MICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWIN 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180 MICAGASGVSSCMGDSGGPLYCKKNGAWTLVGIVSWGSSTCSTSTPGVYARVTALVNWVQ 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 PVCLASTNEALPSGLTCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQYWGAR-I 195
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29
                                                                                                                                                              1 CGVPAIQPVLSGLSRIVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8,
                                Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 244;
                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pancreatic elastase II (EC 3.4.21.71) precursor - pig
N;Alternate names: pancreatopeptidase E
C;Species: Sus scrofa domestica (domestic pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 737; DB 2;
Pred. No. 9.9e-54;
                             54.6%; Score 774.5; DB 1
57.3%; Pred. No. 7.9e-57;
                                                                             32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A Molecule type: protein
Residues: 1-14;55-24 <LET>
C;Superfamily: trypsin, trypsin homology
F;15-237/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.0%;
54.2%;
                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 135; Conserv
                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |::|::| | WVDQILAAN 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       256 WINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QTLAAN 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QVMAYN 264
                                                     Best Local Sımı
Matches 141;
                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196
                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```



11;

16;

57

```
pancreatic elastase (EC 3.4.21.36) IIIB precursor - human
N'Alternate names: 35K glycoprotein; pancreatic protein P35; protein G32; proteinase
C;Specias: Homo sapians (man)
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 22-Jun-1999
C;Accession: B29934; A90516; A27206; A33257; A28932; S04999; S04490
R;Tani, T; Ohsumi, J; Mite, K.; Takiguchi, Y.
J: Biol. Chem. 263, 1231-1239, 1988
A;Title: Identification of a novel class of elastase isozyme, human pancreatic elasta
A;Reference number: A92664; MUID: 88087253; PMID: 2826474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S04999
A; Molecule type: protein
A; Residues: 31-50 < MOD>
A; Residues: 31-50 < MOD>
A; Residues: 249, 275-278, 1989
A; Title: Localization and characterization of the glycosylation site of human pancrea
A; Reference number: S04490; MUID:8928996; PMID:2737288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A Molecule type: protein
A Molecule type: protein
B; Residues: 18-57 < AVI>
B; Residues: 18-57 < AVI>
B; Residues: 18-57 < AVI
B; Residues: 18-57 < AVI
B; Roy-Crotte, O.; Basso, D.; Fournet, B.; Figarella, C.
Biochem. Biophys. Res. Commun. 156, 318-322, 1988
A; Title: Characterization of two glycoproteins of human pancreatic juice: P35, A; Reference number: A28932
A; Molecule type: protein
A; Residues: 'X', 32-52, 'X', 54-55, 'XXX', 59-63 < GUY>
B; Moulard, M.; Refelec., B.; Mallet, B.; Chapus, C.
FEBS Lett. 250, 166-170, 1989
A; Title: Identification of a procarboxypeptidase A-truncated protease E binary
A; Reference number: S04999; MUID:89325560; PMID:2753124
                                                                                                                                                                                                                                        SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGRLQTNGAV-PDVLQQ 175
                                                                                                                                                                                                                                                                                                                                                                       59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                              57 TCGGSLIANSWVLTAAHCISSSRTYRVGLGRHNLYVAESGSLAVSVSKIVVHKDWNSNQI 116
                                                                                                                                                                                                   N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Residues: 1-270 < TAN>
A; Cross-references: GB:M18692; NID:g607029; PIDN:AAA58454.1; PID:g182035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA A; Molecule type: DNA A; Molecule type: CV: 5-63, 'G', 65-78, 'W', 80-163,'P', 165-270 <FLE> R; Aviles, F.X.; Pascual, R.; Salva, M.; Bonical, J.; Puigserver, A. Biochem. Blophys. Res. Commun. 163, 1191-1196, 1989 A; Title: Generation of a subunit III-11ke protein by autolysis of human A; Reference number: A33257; MUID:89392022; PMID:2675835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E determined by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: A90516
A; Molecule type: mRNA
A; Residues: 'G',5-63,'G',65-78,'W',80-118,'G',120-163,'P',165-270 <SHE>
R; Fletcher, T.S.
      MIRTLLLSTLVAG-ALSCGDPTYPP---YVTRVVGGEEARPNSWPWQVSLQYSSNGKWYH
                                                                                                                                                                                                                                                                                                                                     VVLPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Shen, W.; Fletcher, T.S.; Largman, C.
Blochemistry 26, 3447-3452, 1987
A;Title: Primary structure of human pancreatic protease
A;Reference number: A90516; MUID:88000545; PMID:3477287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |:|:: || |:: || |:::|||| |: ||| |:| |
SFGSRLGCNYYHKPSVFTRVSNYIDWINSVIANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Contents: revision to residue 119
A; Accession: A27206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitted to GenBank, August 1987
A, Reference number: A94507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Accession: B29934
                                                                                                                                                                                                                                                                117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236
                                                                                                                                                                                                                                                                                                                                 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                 õ
                                                                                                                              g
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Accession: B26823
:Molecule type: mRNA
:Molecule type: mRNA
:Molecule 1-269 < KAMA
:Cross-references: GB:M16652; NID:g182057; PIDN:AAA52380.1; PID:g182058
:Fletcher, T.S.; Shen, W.F.; Largman, C.
iochemistry 26, 7256-7251, 1987
:Title: Primary structure of human pancreatic elastase 2 determined by sequence analysi
:Reference number: A27432; MUID:88107669; PMID:3427074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complexes involving procarboxype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:M16631; NID:g182022; PIDN:AAA52374.1; PID:g182023
R;Shirasu, Y.; Yoshida, H.; Matsuki, S.; Takemura, K.; Ikeda, N.; Shimada, Y.; Ozawa, T.
Bicchem. 102, 1555-1563, 1997
A;Title: Molecular cloning and expression in Escherichia coli of a cDNA encoding human
A;Reference number: A41431; MUID:88198076; PMID:2834346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :Title: Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs Reference number: A90958; MUID:87217962; PMID:3646943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pancreatic elastase II (EC 3.4.21.71) A precursor - human C; Species: Homo sapiens (man) C; Species: Homo sapiens (man) C; Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 20-Jun-2000 C; Accession: B26823; A27432; A41431; S34491 B; Kswashima, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
                                                                                                                                                                                                                                                                231
   HFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANT 117
                                                          HTCGGSLVANNWVLTAAHCISNSRTYRVLLGRHSLSTSESGSLAVQVSKLVVHEKWNAQK 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PID:9219620
as Cys
                                                                                                                                                                    MN--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLO
                                                                                                                                                                                                                                                             QVVLPLVTVNQC -- RQYWGARITDAMICAGGSG-ASSCQGDSGGPLVCQKGN-TWVLIGI
                                                                                                                                                                                                                                                                                                                          177 GGRLLVVDYATCSSASWWGSSVKTNMVCAGGDGVTSSCNGDSGGPLNCQASNGQWQVHGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A Map position: Izpter-Izqter
C. Superfamily: trypsin; trypsin homology
C. Superfamily: trypsin; trypsin homology
C. Superfamily: trypsin; trypsin homology
C. Superfamily: panceas: serine proteinase
F. 17-28/Domain: signal sequence #status predicted <PRO>
F. 29-269/Product: pancreatic elastase IIA #status predicted <MAT>
F. 29-262/Domain: trypsin homology <TRY>
F. 29-262/Domain: trypsin homology <TRY>
F. 211, 216/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :: === - - - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36.3%; Score 515; DB 2; Length 26 Ilarity 41.6%; Pred. No. 2.7e-35; Conservative 47; Mismatches 97; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-201, V',203-269 <SHI>
A;Cross-references: GB:D00236; NID:q219619; PIDN:BAA00165.1;
A;Note: the authors translated the codon GTG for residue 202
A;Note: the hichon, T.; Kerfelec, B.; Chapus, C.
FEBS Lett. 261, 179-183, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fitle: Further studies on the human pancreatic binary; Reference number: 808253; MUID:90169111; PMID:2307232
                                                                                                                                                                                                                                                                                                                                                                                               VSWG-TKNCNI-QAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                    Cross-references: GDB:119866; OMIM:130120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;Molecule type: protein
;Residues: 'X',18-50 <MOU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Molecule type: mRNA
Residues: 1-269 <FLE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Accession: S34491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: A27432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Accession: A41431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene: GDB:ELA1
                                                                                                                              118
                                                                                                                                                                                            118
                                                                                                                                                                                                                                                             176
28
                                                             58
                                                                                                                                                                                                                                                                                                                                                                                               232
                                                                                                                                                                                                                                                                                                                                                                                                                                                         237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
ð
                                                          g
                                                                                                                           ò
                                                                                                                                                                                 g
                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                           a
```

sequence anal

and porcine p

a trun

comple

ò

ò

ò

```
C;Accession: S68825
R;Tomomura, A.; Akiyama, M.; Itoh, H.; Yoshino, I.; Tomomura, M.; Nishii, Y.; Noikura
FEBS Lett. 386, 26-28, 1996
                                                                                                                                                                                                                                                                                                                                                                                                      C;Accession: S68826
R;Tomomura, A.; Akiyama, M.; Itoh, H.; Yoshino, I.; Tomomura, M.; Nishii, Y.; Noikura FEBS Lett. 386, 26-28, 1996
A;Title: Molecular cloning and expression of human caldecrin.
A;Reference number: S68825; MUID:96221265; PMID:8635596
A;Accession: S68826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pancreatic elastase (EC 3.4.21.36) isoform 1 precursor - human
NiAlternate names: caldecrith isoform 1
C.Species: Homo sapiens (man)
C.Species: Homo sapiens (man)
C.Date: 04-Dec-1997 #sequence_revision 12-Dec-1997 #text_change 28-May-1999
                                                                                                                                                                                                                                                            pancreatic elastase (EC 3.4.21.36) isoform 2 precursor - human
NiAlternate names: caldecrin isoform 2
C.Species: Homo sapiens (man)
C.Species: 04-Dec-1997 #sequence_revision 12-Dec-1997 #text_change 30-Jan-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: 568825
A; Molecule type: mRNA
A; Residues: 1-268 <TOM>
A; Cross-references: GB:S82198; NID:91839466; PIDN:AAB47104.1; PID:91839467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVV 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYD-RSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 CGGTLIASNFVLTAAHCISNTWTYRVAVGKNNLEVEDEEGSLFVGVDTIHVHKRWNALLL 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 RNDIALIKLAEHVELSDTIQVACLPEKDSLLPKDYPCYVTGWGRLWTNGPIAD-KLQQGL 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179 LPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIVSW 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ---DNTGFHF 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-268 <TOM>
A; Experimental source: pancreas
C; Superfamily: trypsin; trypsin homology
C; Keywords: hydrolase; pancreas; serine proteinase; zymogen
F;1-16/Domain: signal sequence #status predicted <SIG>
F;17-29/Domain: propeptide #status predicted <PRO>
F;30-268/Product: pancreatic elastase isoform 2 #status predicted <MAT>
F;30-262/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Title: Molecular cloning and expression of human caldecrin. A,Reference number: S68825, MUID:96221265; PMID:8635596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A. Experimental source: pancreas
C. Superfamily: trypsin; trypsin homology
C. Keywords: hydrolase; pancreas; serine proteinase; zymogen
F. 1-16. Domain: signal sequence #status predicted <SIG>
F:17-29. Domain: propeptide #status predicted <PRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.9%; Score 495.5; DB 2;
40.1%; Pred. No. 1.1e-33;
tive 46; Mismatches 102;
                                      GT-KNCNI-QAPAMYTRVSKFSTWINQVM 261
   SWGTKNCNIQAPAMYTRVSKFSTWINQVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Similarity
Matches 108; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
S68825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           235
   233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C, Accession: T30337
R; Yang, J C.; Lindsay, L.L.; Hedrick, J.L.
Sbbmitted to the BMBL Data Library, March 1998
A; Description: cDNA cloning of ovochymase, a chymotrypsin-like protease released from Xe
A; Reference number: 220829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
A Residues: 94-128;132-164 < WEN>
A; Residues: 94-128;132-164 < WEN>
C; Superfamily: trypsin, trypsin homology
C; Superfamily: trypsin, trypsin products cside csi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Residues: 1-1524 <YAN>
A;Cross-references: EMBL:U81290; NID:92981640; PID:92981641; PIDN:AAC24717.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polyprotein - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 22-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1264 CGNTTVDPMMLYMARSGKIRNLNKGGKESGRVVGGQQAAPRSWPWLVSIQNSKKRHYCGG 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SLISPNWVVTAAHCQVTPGRHFVVLGEYDRS--SNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DLTLLKLASPARYTAQVSPVCLASTNEALPSGLT-----CVTTGWGRISGVGNVT-PA 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIV 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNAN 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : ||: |:||: |: | : | : ||: | : ||...|
117 CVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNETPCYITGWGRLYTNGPL-PDKL 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117 TM--NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARL 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176 QEALLPVVDYEHCSRWNWWGSSVKKTMVCAGGDIRSGCNGDSGGPLNCPTEDGGWQVHGV 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 CGVPAITPALSY------NQRIVNGENAVPGSWPWQVSLQDNTGFHFCGG 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQVVLPLVTVNQCRQ - - YWGARITDAMICAGGSGASSCQGDSGGPLVC-QKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                57 TCGGSLIAPDWVVTAGHCISSSRTYQVVLGEYDRAVKEGPEQVIPINSGDLFVHPLWNRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 1524;
                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 513.5; DB 2; Length 2; Pred. No. 3.5e-35; 46; Mismatches 97; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35.2%; Score 499; DB 2; 36.8%; Pred. No. 4e-33; ive 52; Mismatches E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |: :| || : :|||| || : :|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           232 VSW-GTKNCNI-QAPAMYTRVSKFSTWINQVMA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                    36.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 36.8'
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 41.49
Matches 113; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
```

-

6

```
F;30\text{-}268/\text{Product}: pancreatic elastase isoform 1 #status predicted <MAT> F;30\text{-}262/\text{Domain}: trypsin homology <TRY>
```

	aps 9;	. 59	. 58	118	, 118	178	. 177	1 234	. 237		
	Matches 108; Conservative 46; Mismatches 102; Indels 13; Gaps	3 LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHF 59		60 CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYD-RSSNAEPVQVLSIARAITHPNWNANTM 118	59 CGGTLIASNFVLTAAHCISNTRTYRVAVGKNNLEVEDEEGSLFVGVDTIHVHKRWNALLL 118	119 NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLOQVV 178	119 RNDIALIKLAEHVELSDTIQVACLPEKDSLLPKDYPCYVTGWGRLWINGPIAD-KLQQGL 177	179 LPLVTVNQCRQYWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIVSW 234	178 QPVVDHATCSRIDWWGFRVKKTWVCAGGDGVISACNGDSGGPLNCQLENGSWEVFGIVSF	235 GT-KNCNI-QAPAMYTRVSKFSTWINOVM 261	
Nery M	atches	m	7	9	59	119	119		178	235	
υш.	~	ò	g	ò	Dp	ò	g	ò	q	ò	i

Search completed: December 20, 2002, 15:19:48 Job time : 17.6957 secs

j Y

No.

```
GenCore version 5.1.3

Copyright (c) 1993 - 2002 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 20, 2002, 15:14:28 ; Search time 14.6087 Seconds

(without alignments)

1520.126 Million cell updates/sec

1221
Sequence: US-09-856-3198-2_COPY_1_231
Sequence: 1221
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224
```

1: pirl:*
2: pir2:*
3: pir3:*
4: pir4:*
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_73:*

Database

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Ouerry Autor Length DB ID  114 99.4 264 2 138136  714.5 59.5 263 2 A21195  701.5 57.5 263 2 A31299 670.5 56.5 263 2 A31299 666.5 54.6 245 1 KYRDB 666.5 54.6 245 1 KYRDB 665.5 53.8 245 1 KYRDB 653 33.6 24 2 A3229 451 36.9 126 2 A26823 451 36.9 126 2 A26823 451 36.9 126 2 A26823 451 36.9 271 1 ELRT2 420.5 33.6 126 2 A25823 420.5 33.6 126 2 A25823 410.5 33.6 126 2 A25824 410.5 33.6 126 2 A25934 410.5 33.6 13.8 1 A57014 40.9 33.1 460 2 B61546 390.5 32.4 1035 1 A43090 390.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 388.3 31.9 270 2 S6160	;		<b>æ</b> (			SUMMARIES	
1214 99.4 264 2 138136 701.5 58.5 263 2 A21195 701.5 58.5 263 2 A21195 689.5 56.5 263 2 A31299 666.5 54.6 245 1 KYRTB 666.5 53.8 245 1 KYRDB 657.5 53.8 245 1 KYRDB 657.5 53.8 245 1 KYRDB 653 53.5 244 2 S72219 472 37.1 270 2 A23473 445 36.4 20.9 2 A23473 445 36.4 27 20.9 2 A23473 445 35.9 269 2 C26823 420.5 33.6 34.4 27 27 2 A23473 400.5 33.6 34.4 27 27 2 A25528 410.5 33.6 34.4 27 2 A25528 410.5 33.6 34.4 27 2 A25528 410.5 33.6 1524 2 T30337 404 33.1 460 2 B61545 397 32.2 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 S61545 389.5 31.9 270 2 S61545	Result No.	Score	Query Match		DB	01	Description
701.5 58.5 263 2 A21195 701.5 57.5 263 2 A21195 689.5 56.5 263 2 A31299 666.5 54.6 245 1 KYRTB 666.5 53.8 24.6 1 KYRTB 657.5 53.8 245 1 KYRDB 657.5 53.8 245 1 KYRDB 653.5 33.5 244 2 S7219 453.5 37.1 270 2 B29934 445 36.4 27 270 2 A23473 445 36.4 27 270 2 A23473 420.5 33.6 2 26823 410.5 33.6 2 26823 400.3 33.5 1524 2 713337 400 33.5 1524 2 713337 400 33.5 1524 2 713337 400 33.1 600 2 B61545 397 32.6 1005 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 S6165	Н	1214	99.4		7	I38136	chymotrypsin-like
701.5 57.5 263 2 S47537 689.5 56.5 263 2 A7537 670.5 54.9 2 65.5 263 2 A31299 670.5 54.6 24.9 1 KYRUB 666.5 54.6 245 1 KYRUB 657.5 53.8 245 1 KYRUB 472 38.7 269 2 A26823 451 87 20 2 B29934 451 35.9 270 2 B29934 457 36.4 269 2 B26823 420.5 34.4 270 2 B29934 410.5 33.6 32.4 270 2 A25528 420.5 34.4 270 2 A25528 420.5 33.6 33.6 33.6 33.6 33.6 33.6 33.6 33	7	714.5	58.5		~	A21195	`
689.5 56.5 263 2 A31299 667.5 54.9 263 1 KYRDB 666.5 54.6 245 1 KYRDB 657.5 53.8 245 1 KYRDB 657.5 53.8 245 1 KYRDB 657.5 53.8 244 2 S72219 472 38.7 272219 451 36.9 126 2 A26823 451 36.9 126 2 A26823 420.5 37.1 270 2 B2934 427 35.0 269 2 C26823 420.5 34.4 271 1 ELRT2 420.5 34.4 271 2 A2528 410.5 33.6 34.4 2 730337 404 33.1 660 2 B61545 396.5 32.4 1035 1 A43090 396.5 32.4 1035 1 A43090 396.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 S6165	m	701.5	57.5	263	~	S47537	
670.5 54.9 263 1 KYRTB 666.5 54.6 245 1 KYRTB 657.5 53.8 245 1 KYBOB 657.5 53.8 245 1 KYBOB 657.5 53.8 245 1 KYBOB 653.5 53.6 24 2 \$72219 472 33.1 270 2 82923 445 35.9 2 72 20 2 829334 445 35.9 2 70 2 829334 415 35.0 269 2 C26823 420.5 33.6 33.5 124 2 73337 400 33.5 124 2 73337 400 33.5 124 2 73337 460 2 861545 397 32.5 810 1 PLHU 2 839.5 32.0 268 2 \$6826 390.5 32.0 268 2 \$6826 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 \$56165 389.5 31.9 270 2 \$56165	4	689.5	56.5	263	~	A31299	
666.5 54.6 245 1 KYBOB 657.5 53.8 245 1 KYBOB 653.5 33.8 245 1 KYBOA 472 38.7 269 2 A26823 453.5 37.1 270 2 B2934 445 36.4 269 2 B26823 427 35.0 2 B2 623 427 35.0 269 2 B2 6823 427 35.0 269 2 C26823 427 35.0 269 2 C26823 427 33.6 34.4 270 2 A25528 410.5 33.6 371 2 A25528 410.5 33.6 371 2 A25528 410.5 33.6 371 2 A25528 410.5 33.6 371 2 A25528 410.5 33.6 32.8 310 1 PLHU 396.5 32.4 1035 1 A43090 397.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 240 2 S61645	ß	670.5	54.9	263	н	KYRTB	
657.5 53.8 245 1 KYBOA 472 38.7 269 2 A26823 451.3 5.9 126 2 A26823 445 36.9 126 2 B2934 445 35.9 27.1 ELRT2 447 35.0 2 B26823 420.5 34.4 271 1 ELRT2 420.5 34.4 271 2 A2528 410.5 33.6 34.3 1 A57014 404 33.1 460 2 B61545 404 33.1 460 2 B61546 396.5 32.4 1035 1 A43090 397 32.6 810 1 PLHU 396.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 S6165 389.5 31.9 270 2 S6165	9	666.5	4	245	-	KYBOB	
453 53.5 244 2 872219 472 38.7 209 2 A26823 453.5 37.1 270 2 B29934 445 36.4 2 872473 445 36.4 2 872473 420.5 35.0 2 69 2 B26823 420.5 34.4 2 77 2 A25934 410.5 33.6 34.4 2 77 2 A25934 410.5 33.6 34.3 1 A57014 404 33.1 60.2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 268 2 86826 390.5 32.0 268 2 86826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 861545 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 86826 389.5 31.9 240 1 CPBOA3 389.5 31.9 270 2 86826	7	657.5	53.8	245	-	KYBOA	
472 38.7 269 2 A26823 453.5 37.1 270 2 B29934 445 36.9 126 2 A23473 448 35.9 271 1 ELRT2 420.5 34.4 270 2 A29934 410.5 34.0 270 1 2 A29934 400.5 34.4 270 2 A29934 400.5 33.6 124 2 A25528 410.5 33.6 124 2 T30337 404 33.1 460 2 B61545 397 32.5 810 1 PLMU 396.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545	<b>6</b> 0	653	53.5	244	7	S72219	
453.5 37.1 270 2 B29934 4451 36.9 126 2 A23473 4458 35.9 271 1 ELRT2 420.5 34.4 270 2 B26823 420.5 34.4 270 2 A2934 410.5 33.6 34.4 271 2 A25528 410.5 33.6 34.3 1 A257014 409 33.1 460 2 B61549 396.5 32.4 1035 1 A43090 396.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPB0A3 389.5 31.9 240 1 CPB0A3 389.5 31.9 270 2 S6165	6	472	38.7	269	~	A26823	pancreatic elastas
451 36.9 126 2 A23473 445 36.4 269 2 B26823 438 35.9 271 1 ELRT2 420.5 34.4 271 2 A25934 410.5 33.6 34.3 1 A57014 409 33.5 1524 2 730337 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 2 S68165	10	453.5	37.1	270	~	B29934	pancreatic elastas
445 36.4 269 2 B26823 428 35.9 271 1 EERTZ 420.5 34.4 270 2 A2934 410.5 34.0 271 2 A2528 410.5 33.6 371 2 A2528 400.5 33.6 1524 2 T3034 404 33.1 460 2 B61545 397 32.5 1524 2 T30337 404 33.1 460 2 B61545 397 32.4 1035 1 A43090 390.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 2 PLMS 389.5 31.9 240 2 S68826 389.5 31.9 240 2 S68826 389.5 31.9 240 1 SPBOA3 389.5 31.9 240 2 S68826 389.5 31.9 240 2 S68826	11	451	36.9	126	~	A23473	
438 35.9 271 1 ELRT2 420.5 34.4 270 2 626823 420.5 34.4 270 2 A25528 410.5 33.6 33.1 2 A25528 404 33.1 460 2 B61545 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPB0A3 389.5 31.9 455 2 A61545 389 31.9 270 2 S56160	12	445	36.4		~	B26823	pancreatic elastas
427 35.0 269 2 C26823 420.5 34.4 270 2 A2934 410.5 33.6 34.3 1 A57014 409 33.5 154 2 T30337 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 388 31.8 270 2 S56160	13	438	35.9		Н	ELRT2	
420.5 34.4 270 2 A29934 410.5 34.0 271 2 A25528 410.5 33.6 343 1 2 A25528 400 33.5 1524 2 T30337 404 33.1 460 2 B61545 397 32.5 100 1 PLHU 395.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 389 31.9 270 2 S56160	14	427	35.0	269	7	C26823	
415 34.0 271 2 A25528 410.5 33.6 343 1 A57014 409 33.5 1224 2 73037 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 389 31.9 270 2 S56160	15	420.5	34.4	270	7	A29934	
410.5 33.6 343 1 A57014 409 33.5 1524 2 T30337 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 389 31.9 270 2 S56160	16	415	34.0	271	~	A25528	pancreatic elastas
409 33.5 1524 2 T30337 404 33.1 460 2 B61545 397 32.5 810 1 PLHU 396 32.4 810 2 B30848 395.5 32.4 1035 1 A43090 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 399.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 389 31.9 455 2 S6160	17	-	33.6	343	Н	A57014	) 임
404 33.1 460 2 B61545 397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68826 389.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 388 31.8 270 2 S56160	18	409	33.5	1524	7	T30337	ein -
397 32.5 810 1 PLHU 395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 568826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 389 31.9 270 2 556160	19	404	33.1	460	7	B61545	
396 32.4 810 2 B30848 395.5 32.4 1035 1 A43090 391 32.0 795 1 PLPG 390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68825 389.5 31.9 240 1 CPBOA3 389.5 31.9 455 2 A61545 388 31.9 270 2 S56160	20	397	32.5	810	Н	PLHU	_
395.5 32.4 1035 1 A43090 391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 240 1 CPBOA3 389 31.9 455 2 A61545 388 31.8 270 2 S56160	21	396	32.4	810	7	B30848	<u>ဗ</u>
391 32.0 790 1 PLPG 390.5 32.0 268 2 S68826 390.5 31.9 240 1 CPBOA3 389.5 31.9 812 1 PLMS 389 31.9 455 2 A61545 388 31.8 270 2 S56160	22	395.5	32.4	1035		A43090	enteropeptidase (E
390.5 32.0 268 2 S68826 390.5 32.0 268 2 S68825 389.5 31.9 20.0 1 CPBOA3 389.5 31.9 812 1 PLMS 389 31.9 455 2 A61545 388 31.8 270 2 S56160	23	391	32.0	790		PLPG	plasmin (EC 3.4.21
390.5 32.0 268 2 S68825 389.5 31.9 240 1 CPBOA3 389.5 31.9 812 1 PLMS 389 31.9 455 2 A61545 388 31.8 270 2 S56160	24	390.5	32.0	268	~	S68826	pancreatic elastas
389.5 31.9 240 1 CPBOA3 389.5 31.9 812 1 PLMS 389 31.9 455 2 A61545 388 31.8 270 2 S56160	25	390.5	32.0	268	7	S68825	pancreatic elastas
389.5 31.9 812 1 PLMS 389 31.9 455 2 A61545 388 31.8 270 2 S56160	26	389.5	31.9	240	-	CPBOA3	procarboxypeptidas
8 389 31.9 455 2 A61545 plasmin (E 9 388 31.8 270 2 S56160 mast cell	27	389.5	31.9	812	-	PLMS	plasmin (EC 3.4.21
9 388 31.8 270 2 S56160 mast cell	28	389	31.9	455	7	A61545	
	53	388	31.8	270	7	S56160	mast cell tryptase

RESULT 2
A21195
chymotrypsin (EC 3.4.21.1) 2 precursor - dog
c;Species: Canis lupus familiaris (dog)
C;Species: 27-uul-1990 #sequence_revision 27-Jul-1990 #text_change 22-Jun-1999
C;Accession: A21195

g

ò

q

ò

serine proteinease oviductin (EC 3.4. trypsin (EC 3.4.21 enteropebildase (EC 3.4.21 plasma kallikrein plasma kallikrein plasma kallikrein plasmin (EC 3.4.21 low-density lipopr trypsin (EC 3.4.21 trypsin (EC 3.4.21 pancreatic elastas pancreatic elastas trypsin (EC 3.4.21	***************************************	human	Q	Indels 0; Gaps 0; PWOVSLQDSSGFHFC 60
A47547 T30338 S35067 S31709 A47246 A7246 A7246 A76318 S55066 S75066 JE0315 TRECT TRECT A101473 FLRT TRECT TRECT TRECT TRECT TRECT TRECT TRECT TRECT	ALIGNME	3.4.21) CTRL-1 - rision 06-Sep-1996 ansen, T.; Kolsto, 993 unrelated human ge 94093544; PMID:826 1 from GB/EMBL/DDBJ	/3; 167/1; 211/3 homology otelnase y <trx> sp, Ser #status predicted Score 1214; DB 2; Len</trx>	Pred. 0; Mis AIKPALSI         AIKPALSI          HFVVLGE
786 1 10004 2 248 2 248 2 248 2 246 1 1019 1 1019 1 1113 2 268 1 266 1 247 2 268 1 268 1		(man) juence_re i, Krist i, Krist i of five i of five iranslate ix71874;	204061 16922.1 19/2; 106 trypsin serine pr n homolog n homolog	99.6%; rative ssswGcGIP 
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		ke proteinase saptens (man) saptens (man) 1996 #sequens (man) 136 colhelm, J.; Kr. 2, 1589-1595 t. cluster of ferring 138135; Mannary; translinary; translinary; cansless EMBL:X718 ces: EMBL:X718	L 16922.1- ; 52/3; 7 trypsin; rolase; s: trypsir tive site	Best Local Similarity 99. Matches 230; Conservative 1 MLLESLTLSLVLLGSSWGC
3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		chymotrypsin-like C.Specides: Homo ss C.Date: 06-58p-19 C.Accession: 1381; R.Larsen, F.; Soll Hum. MOI. Genet. A.Title: A tight A.Reference numbes A.Recession: 1381; A.Status: prelimil A.Status: prelimil A.Residues: 1-264 A.Residues: 1-264 A.Cross reference	Genetics: Gene: GDB:CTR Gene: GDB:CTR Cross referen Map position: Introns: 18/1 Superfamily: Superfamily: 34-25//Domain 75,121,214/Ac	Local S1 es 230; 1 MLLLS        1 MLLLS 61 GGSLI 
WWWWWWWWWWA4444 OHUW4WAVOVBOOHUW4W	RESULT 138136	chymotr C;Speci C;Date: C;Date: C;Acces R;Larse Hum. Mo A;Refer A;Refer A;Acces, A;Restud A;Mesed A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Resid A;Re	C, Genet A, Gene: A, Cross A, Map A, Intro C, Super C, Keywo F, 34-25 F, 75, 12	Best Match Qy Qy

```
R;Pinsky, S.D.; LaForge, K.S.; Luc, V.; Scheele, G.
Proc. Natl. Acad. Sci. U.S.A. 80, 7486-7490, 1983
A;Title: Identification of cDNA clones encoding secretory isoenzyme forms: sequence A;Reference number: A21195; MUID:84170253; PMID:6584866
                                                                                                                                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chymotrypsin (EC 3.4.21.1) precursor - Atlantic cod
C;Species: Gadus morhua (Atlantic cod)
C;Date: 26-Dec-1994 *Requence_revision 03-Aug-1995 *text_change 22-Jun-1999
C;Accession: S47537; S43163
R;Gudmundsdottir, A.; Oskarsson, S.; Eakin, A.E.; Craik, C.S.; Bjarnason, J.B.
Biochim. Biophys. Acta 1219, 211-214; 1994
A;Title: Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.
A;Reference number: S47537; MUID:94368860; PMID:8086467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72 TAAHCNVK-NYHRVVLGEHDRSSNSEGVQVMTVGQVFKHPRYNGFTINNDILLVKLATPA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72 TAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:9468751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             132 QYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYW 191
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12 LFRRTYGCGRPAISPVITGYSRIVNGEEAVPHSWSWQVSLQDQTGFHFCGGSLINENWVV 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 LLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVV 71
                                                                                                                                                                                                                        PID:9163946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                                                                                                                                                               Score 714.5; DB 2; Length 263;
Pred. No. 5e-53;
5; Mismatches 64; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 57.5%; Score 701.5; DB 2; Length 263; Best Local Similarity 58.6%; Pred. No. 6.3e-52; Matches 129; Conservative 33; Mismatches 57; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X78490; NID:g468750; PIDN:CAA55242.1;
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; protein digestion; serine proteinase
F;1-18/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                             A,Cross-references: GB:K01173; NID:g163945; PIDN:AAA30841.1; C;Superfamily: trypsin; trypsin homology C;Keywords: hydrolase; protein digestion; serine proteinase F;34-256/Domain: trypsin homology <*TRX>
F;37.20,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;19-263/Product: chymotrypsin #status predicted <MAT>
F;34-256/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192 DSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                      35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                 58.5%; Score 714.5; 56.7%; Pred. No. 5e-
                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 56.79
1; Conservative
                                                                                                                                  A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-263 <PIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-263 <GUD>
                                                                                                               A; Accession: A21195
                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Sim
Matches 131;
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
```

```
Biochem, Biophys. Res. Commun. 158, 569-575, 1989
A;Title: Molecular cloning and nucleotide sequence of human pancreatic prechymotryps. A;Reference number: A31299; MUID:89134264; PMID:2917002
A;Reference number: A31299
A;Reference number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: A22658
R;Bell, G.I.; Quinto, C.; Quiroga, M.; Valenzuela, P.; Craik, C.S.; Rutter, W.J. D;Biol. Chem. 259, 14265-14270, 1984
A;Title: Isolation and sequence of a rat chymotrypsin B gene.
A;Reference number: A22658; MUID:85054881; PMID:6209274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chymotrypsin (EC 3.4.21.1) B precursor - rat
N;Alternate names: chymotrypsinogen B
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Dec-1987 #sequence_revision 28-Dec-1987 #text_change 18-Jun-1999
                                                                                                                                                                                                                                                                              chymotrypsin (EC 3.4.21.1) precursor - human
C;Species: Homo sapiens (man)
C;Date: 08-Jun-1989 #sequence_revision 08-Jun-1989 #text_change 22-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQGSDEENIQVLKIAKVFKNPKFSILTVNN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A Molecule type: mRNA
A; Residues: 1-263 <TOM>
A; Residues: 1-263 <TOM>
A; Cross-references: GB:MZ4400; NID:g181189; PIDN:AAA52128.1; PID:g181190
C; Genetics:
A; Gene: GDB:CTRB1; CTRB
A; Cross-references: GDB:119820; OMIM:118890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:K02298; NID:g203653; PIDN:AAA98732.1; PID:g203654
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Superfamily: trypsin; trypsin homology
C; Reywords: hydrolase; pancreas; protein digestion; serine
F:1-18, Domain: signal sequence #status predicted SIG>
F:19-33/Domain: propeptide #status predicted <PRO>
F:34-25/Product: chymotrypsin B #status predicted <MAT>
F:34-25/Domain: trypsin homology <TRY>
F:75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,Map position: 16q23.1-16q23.1
C;Superfamily: trypsin; trypsin homology
C;Reywords: hydrolase; protein digestion; serine proteinas
F;34.256/Domain: trypsin homology <TRY>
F;75,120,213/Active site: His, Asp, Ser #status predicted
67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56.5%; Score 689.5; DB 255.4%; Pred. No. 6.5e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Introns: 18/1; 52/3; 79/2; 105/3; 166/1; 210/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-263 <BEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: A22658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

ï

```
A; Molecule type: protein
A; Residues: 1-101, /N./103-245 < MEL>
A; Residues: 1-101, /N./103-245 < MEL>
A; Residues: 1-101, /N./103-245 < MEL>
A; Note: disulfide bonds were determined
B; Note: disulfide bonds were determined
B; Cutruzzola, F.; Ascenzi, P.; Barra, D.; Bolognesi, M.; Menegatti, E.; Sarti, P.; Sc
Biochim. Biophys. Acta 1161, 201-208, 1993
A; Title: Selective oxidation of Met-192 in bovine alpha-chymotrypsin. Effect on catal
A; Reference number: S29650; MUID:93160238; PMID:8431470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Rocelle type: protein
A; Residues: 1-12;16-27;149-160;181-200 <CUT>
A; Rolecule type: protein
A; Residues: 1-12;16-27;149-160;181-200 <CUT>
E; Smillie, L.B.; Hartlery, Bs.
B; Smillie, L.B.; Hartlery, Bs.
B; Smillie, L.B.; Hartlery, Bs.
A; Reference number: A90236; MUD:67181723; PMID:5971785
A; Reference number: A90236; MUD:67181723; PMID:5971785
A; Contents: annotation; active site
B; Birktoft, J.J.; Blow, D.M.; Henderson, R.; Steitz, T.A.
B; Birktoft, J.J.; Blow, D.M.; Henderson, R.; Steitz, T.A.
B; Birktoft, J.J.; Blow, D.M.; Henderson, R.; Steitz, T.A.
B; Contents: annotation; X-ray crystallography
C; Comment: A93754
A; Contents: annotation; X-ray crystallography
C; Comment: Tryptic cleavage after Arg-15 results in a fully active enzyme (pi-chymotry pain; further chymotryptic cleavage liberates the dipeptide Thr-147 and Asn-148 directly from chymotryptic cleavage liberates the dipeptide Thr-147 and Asn-148 directly from chymotryptic protein digestion; serine proteinase; zymogen C; Superfamily: trypsin; trypsin homology
C; Reywords: hydrolase; panoreas; protein digestion; serine proteinase; zymogen C; Reywords: hydrolase; panoreas; protein digestion; serine proteinaental cMPT>
F; 16-238/Domain: trypsin homology cPRY>
F; 16-238/Domain: trypsin homology cPRY>
F; 1122,42-58,136-201,168-182,191-220/Disulfide bonds: #status experimental
F; 57,102,195/Active site: His, Asp, Ser #status experimental
                                                                                             diagonal paper electrophoresis. The disu-p PMID:5971783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vanacek, J.; Keil, B.; S
                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 1-101, N', 103-245 <BRO>
A; Residues: 1-101, N', 103-245 <BRO>
A; Residues: 1-101, N', 103-245 <BRO>
Nature 221, 337-340, 1969
A; Title: Role of a buried acid group in the mechanism of action of chymotrypsin.
A; Reference number: A93158; MUID: 69106266; PMID: 5764436
A; Contents: annotation; revision to residue 102
B; Melonin, B.; Kluh, I.; Kostka, V.; Moravek, L.; Prusik, Z.; Vanacek, J.; Keil, Shelonin.
Biochim. Biophys. Acta 130, 543-546, 1966
A; Title: Covalent structure of bovine chymotrypsinogen A.
A; Reference number: A90572; MUID: 67183948; PMID: 5972866
A; Accession: A93158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53.8%; Score 657.5; DB 1; Length 245; 54.9%; Pred. No. 3e-48; 1ive 37; Mismatches 58; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
    R;Brown, J.R.; Hartley, B.S.
Biochem. J. 101, 214-228, 1966
A;Title: Location of disulphide bridges by
A;Reference number: A90235; MUID:67181721;
A;Accession: A90235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chymotrypsin (EC 3.4.21.1) B precursor - bovine
N.Alternate names: chymotrypsinogen B
C; Species: Bos primipenius taurus (cattle)
C; Date: 08-Oct-1981 #sequence_revision 08-Oct-1981 #text_change 18-Jul-1997
C; Accession: A00953
R; Smillie, L.B.; Furka, A.; Nagabhushan, N.; Stevenson, K.J.; Parkes, C.O.
Nature 218, 343-346, 1968
A; Title: Structure of chymotrypsinogen B compared with chymotrypsinogen A and trypsinoge
A; Recence number: A00953; MUD: 68238908; PMID: 5649671
A; Recence number: A00953; MUD: 68238908; PMID: 5649671
A; Recence number: A00953
A; Molecule type: protein
A; Recence number: A00953
C; Comment: Chymotrypsinogen B is synthesized, along with chymotrypsinogen A, in the acin C; Comment: The first activation cleavage, leading to pi-chymotrypsin B, occurs in the sact C; Superfamily: trypsin homology
C; Superfamily: trypsin perpetide #status experimental <ARAT>
F; 1-15/Domain: propeptide #status experimental <ARAT>
F; 1-245/Forduct: chymotrypsin B #status experimental <AMAT>
F; 1-245/Forduct: chymotrypsin homology <ARX>
F; 1-245/Forduct: chymotrypsin homology <ARX>
F; 1-122, 42-58, 136-201, 168-182, 191-220/Disulfide bonds: #status experimental
F; 57, 102, 195/Active site: His, Asp, Ser #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ij
                                                                                                 ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chymotrypsin (EC 3.4.21.1) A precursor - bovine N:Alternate names: chymotrypsinogen A C:Species: Bos primigenius taurus (cattle) C;Date: 07-May-1981 #sequence_revision 07-May-1981 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ||| ||::| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||
                                                                                                                                                                                                                                                                                                                                                 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                             DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139 PVCLASSNEALTEGLICVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDS 198
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                              1 MAFLWLVSCFALVGATFGCGVPTIQPVLTGLSRIVNGEDAIPGSWPWQVSLQDKTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                        Ϊ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 245;
             Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 54.6%; Score 666.5; DB 1
Best Local Similarity 57.3%; Pred. No. 5.2e-49;
Matches 122; Conservative 28; Mismatches 62
54.9%; Score 670.5; DB 1
53.2%; Pred. No. 2.6e-49;
1ve 35; Mismatches 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 123; Conservative
                                                Similarity
        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KYBOA
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
117
                                                                                                                                                                                       q
    셤
                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are exp
A;Reference number: A90958; MUID:87217962; PMID:3646943
                                                                                                                                                                             Ricth-Larsen, R.; Asgeirsson, B.; Thorolfsson, M.; Norregaard-Madsen, M.; Hojrup, P. Biochim. Biophys. Acta 1297, 49-56, 1996
A;Title: Structure of chymotrypsin variant B from Atlantic cod, Gadus morhua.
A;Reference number: S72219; MUID:96439045; PMID:8841380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
chymotrypsin B - Atlantic cod (fragments)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 19-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 07-Aug-1998
C;Accession: S72219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pancreatic elastase II (EC 3.4.21.71) precursor - pig
N'Alternate names: pancreatopeptidase E
C.Species: Sus scrofa domestica (domestic pig)
C.Date: 16-Aug-1988 #sequence_revision.16-Aug-1988 #text_change 22-Jun-1999
C.Accession: A.268.3
R.Kawashima, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 RT-YHRVIVGEHDKASD-ENIQILKPSMVFTHPKWDSRIINNDISLIKLASPAVLGINVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 PVCLASSNEALTEGLICVITGWG--RLSGVGNVIPAHLQQVALPLVTVNQCRQYW-DSSI 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Accession: A26823
A; Molecule type: mRNA
A; Molecule type: molecul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 38.7%; Score 472; DB 2; Length 269; Best Local Similarity 45.6%; Pred. No. 1.6e-32; Matches 109; Conservative 32; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    53.5%; Score 653; DB 2; 57.9%; Pred. No. 7.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                     A)Status: preliminary
A;Molecule type: protein
A;Residues: 1-14;15-244 <LET>
C;Superfamily: trypsin; trypsin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;15-237/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 57.9%
Matches 125; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
A; Accession: A7206
A; Molecule type: DNA
A; Residues: (5,5-63,40,465-78,40,40-163,79,165-270 < PLE>
A; Recession: A7206
A; Molecule type: DNA
A; Residues: (6,5-63,40,40,40,40)
Biochem. Biophys. Res. Commun. 163, 1191-1196, 1989
A; Title: Generation of a subunit III-11ke protein by autolysis of human and porcine p
A; Reference number: A33257; MUID:89392022; PMID:2675835
A; Accession: A33257
A; Molecule type: protein
A; Residues: 18-57 < ANI>
B; Molecule type: protein
A; Reference number: A28932; MUID:89025862; PMID:3178837
A; Title: Characterization of two qlycoproteins of human pancreatic juice: P35, a trun
A; Reference number: A28932; MUID:89025862; PMID:3178837
A; Accession: A28932
A; Molecule type: protein
A; Reference number: A28932
A; Molecule type: protein
A; Reference number: A28932
A; Molecule type: Drotein
A; Reference number: S04999; MUID:89325560; PMID:2753124
A; Title: Identification of a procarboxypeptidase A-truncated protease E binary comple A; Reference number: S04999; MUID:89325560; PMID:2753124
                                                                                                                                                                                                                                                                                                                                                                                                pancreatic elastase (EC 3.4.21.36) IIIB precursor - human
N.Alternate names: 35K glycoprotein; pancreatic protein P35; protein G32; proteinase
C; Species: Homo sapiens (man)
C; Species: Homo sapiens (man)
C; Date: 15-Dec-1988 #text_change 22-Jun-1999
C; Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 22-Jun-1999
C; Accession: B29934; A90516; A21206; A31257; A28932; S04999; S04490
R; Tani, T.; Ohsumi, J.; Mita, K.; Takiguchi, Y.
J. Biol. Chem. 263, 1231-1239, 1988
A; Title: Identification of a novel class of elastase isozyme, human pancreatic elasta
A; Reference number: A22664; MUID:88087253; PMID:2826474
A; Accession: B29934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A.Molecule type: mRNA
A.Residues: 1-270 < TANA
A.Residues: 1-270 < TANA
A.Residues: 1-270 < TANA
A.Residues: 1-270 < TANA
A.References: GB:MMB692; NID:g607029; PIDN:AAA58454.1; PID:g182035
B.Shen, W.; Fletcher, T.S.; Largman, C.
Blochemistry 26, 3447-3452, 1987
A.Title: Primary structure of human pancreatic protease E determined by sequence anal A.Title: Primary structure; MuID:88000545; PMID:3477287
A.Reference number: A90516; MuID:88000545; PMID:3477287
A.Residues: 'G',5-63,'G',65-78,'W',80-118,'G',120-163,'P',165-270 <SHE>
B.Fletcher, T.S.
R.Fletcher, T.S.
A.Reference number: A44507
A.Reference number: A44507
A.Concenta: revision to residue 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A. Mesidues: 94-128.132-164 < WENS

A. Residues: 94-128.132-164 < WENS

C. Superfamily: trypsin, trypsin homology

C. Superfamily: trypsin, trypsin, trypsin homology

C. Superfamily: trypsin, trypsin and trypsin activation period of the status predicted < SIGS

F: 13.77.0 main: signal sequence #status predicted < ACT

F: 18-28/Domain: activation peptide #status predicted < ACT

F: 29-270/Product: (or 31-270) pancreatic elastase IIIB #status predicted < MAT>

F: 29-263/Domain: trypsin homology < TRY>

F: 39-263/Domain: trypsin homology < TRY>

F: 31.123/217/Active site: His, Asp, Ser #status predicted

F: 114/Binding site: carbohydrate (Asn) (covalent) #status absent
SNGNDIALLKLASPVSLTDKIQLGCLPAAGTILPNNYVCYVTGWGRLQTNG-ASPDILQQ 175
                                                                                            Ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein
A; Residues: 31-50 CMOU>
R; Wendorf, P.; Geyer, R.; Sziegoleit, A.; Linder,
FEBS Lett. 249, 275-278, 1989
```

Dec

Fri

```
A; Molecule type: mRNA
A; Residues: 1-266 <FIRST
A; Cross-references: GB:MJ6631; NID:g182022; PIDN:AAA52374.1; PID:g182023
A; Cross-references: GB:MJ6631; NID:g182022; PIDN:AAA52374.1; PID:g182023
R; Shirasu, Y.; Yoshida, H.; Matsuki, S.; Takemura, K.; Ikeda, N.; Shimada, Y.; Ozawa, J. Biochem. 102, 1555-1563, 1987
A; Title: Molecular cloning and expression in Escherichia coli of a cDNA encoding huma
A; Reference number: A41431; MUID:88198076; PMID:2834346
                                                                            A; III. Primary structure of human pancreatic elastase 2 determined by sequence anal A; Reference number: A27432; MUID:88107669; PMID:3427074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complexes involving procarbcx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: A00961
R; MacDonald, R.J.; Swift, G.H.; Quinto, C.; Swain, W.; Pictet, R.L.; Nikovits, W.; Ru
Biochemistry 21, 1453-1463, 1982
A; Title: Primary structure of two distinct rat pancreatic preproelastases determined
A; Reference number: A00960; MUID: 82182967; PMID: 6918221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A.Molecule type: mRNA
A.Residues: 1-271 <MAC>
A.Cross-references: GB:L00124; GB:J00731; NID:g204019; PIDN:AAA98780.1; PID:g204021
C.Superfamily: trypsin; trypsin homology
C.Superfamily: trypsin; trypsin serine proteinase; zymogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pancreatic elastase II (EC 3.4.21.71) precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 18-Aug-1982 #sequence_revision 18-Aug-1982 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SKGNDIALLKLANPVSLTDKIQLACLPPRGTILPNNYPCYVTGWGRLQTNGAV-PDVLQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-201,'V'.203-269 <SHI>
A;Cross-references: GB:D00236; NID:9219619; PIDN:BAA00165.1; PID:9219620
A;Cross-references: GB:D00236; NID:9219619; PIDN:BAA00165.1; PID:9219620
A;Note: the authors translated the codon GTG for residue 202 as Cys
R;Moulard, M: Michon, T: Kerfelec, B.; Chapus, C.
FEBS Lett. 261, 179-183, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 LLLSLTLSLTLSSWLGGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A Map position: I2pter-12qter
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; pancreas; serine proteinase
F;1-16/Pomain: signal sequence #status predicted <SIG>F;1-7-28/Domain: propeptide #status predicted <PRO>F;29-569/Product: pancreatic elastase IIA #status predicted
F;29-262/Domain: trypsin homology <TRY>F;39-262/Domain: trypsin homology <TRY>F;33,121,216/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Further studies on the human pancreatic binary A;Reference number: S08253; MUID:90169111; PMID:2307232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36.4%; Score 445; DB 2; 43.9%; Pred. No. 3e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: GDB:119866; OMIM:130120
R;Fletcher, T.S.; Shen, W.F.; Largman,
Biochemistry 26, 7256-7261, 1987
A;Title: Primary structure of human par
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 'X',18-50 <MOU>
C;Genetics:
A;Gene: GDB:ELA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                      A; Accession: A27432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: A41431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: S34491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Accession: A00961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pancreatic elastase II (EC 3.4.21.71) A precursor - human C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 20-Jun-2000
C;Accession: B26823; A27432; A41431; S34491
R;Kawashima, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
DNA 6; 163-172, 1987
A;Title: Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are A;Reference number: A90958; MUID:87217962; PMID:3646943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Attantive proteinase (EC 3.4.21..) - pig (tentative sequence) (fragments)
N.Alternate names: pancreatic elastase II [misidentification]
S.Species: Sus scrofa domestica (domestic pig)
C.Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 31-Mar-2000
C.Accession: A23473
R.Vered, M.; Gertler, A.; Burstein, Y.
R.Vered, M.; Gertler, A.; Burstein, Y.
R.Vered, M.; Gertler, A.; Burstein, Y.
A.; Reference number: A23473; MUID:86194934; PMID:3634756
A.; Reference protein
A.; Residues: 1-126 <VERP.
C.; Superfamily: trypsin; trypsin homology
C.; Keywords: hydrolase; serine proteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3,
                                                                                                                           .;
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |: ||:| | : : | ||: : :|||| | : : ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: 
                                                                                                                                                                                                                                                                                                                                                                           59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRA--ITHPSWNST 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                   57 TCGGSLIAPDWVVTAGHCISSSRTYQVVLGEYDRAVKEGPEQVIPINSGDLFVHPLWNRS 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117 CVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNETPCXITGWGRLYTNGPL-PDKL 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139 PVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHL 174
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                                                                                                                                                            2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A;Residues: 1-269 <KAW>
A;Cross-references: GB:M16652; NID:9182057; PIDN:AAA52380.1; PID:9182058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OOVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV
                                               Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11; Indels
                                                                                                                           Indels
                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 451; DB 2;
Pred. No. 3.9e-31;
                                          37.1%; Score 453.5; DB 2
42.5%; Pred. No. 5.8e-31;
iive 36; Mismatches 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             199 MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36.9%;
43.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67 PVCLASGDEALPEXLPCV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93; Conservative
                                                                                                                       Conservative
                                                                                 al Similarity
102; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 93; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: B26823
                                          Query Match
Best Local S
Matches 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
```

œ

Gaps

W.; Ru

ò g õ Б õ g ò g

```
pancreatic elastase (EC 3.4.21.36) IIIA precursor · human
                               ternate names: protease E
                                                                                                                                                                                                                                             A; Accession: A29934
A; Molecule type: DNA
A; Residues: 1-270 <TAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231 I 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235 V 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ōλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Titie: Charácterization of pancreatic elastase II cDNAs: two elastase II mRNAs are exp
A;Reference number: A90958; MUID:87217962; PMID:3646943
A;Accession: C26823
                                                                                                                                                                                                                         9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pancreatic elastase II (EC 3.4.21.71) B precursor - human
N'Alternate names: pancreatopeptidase E
C.Species: Homo sapiens (man)
C.Species: Homo sapiens (man)
C.Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 22-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57 TCGGSLIANSWVLTAAHCISSSRIYRVMLGQHNLYVAESGSLAVSVSKIVVHKDWNSNQV 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 N.-NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                      59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SNGNDIALVKLASPVALTSKIQTACLPPAGTILPNNYPCYVTGWGRLQTNG-ATPDVLQQ 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MIRTLLLSTLVAG-ALSCGVSTYAPDMS---RMLGGEEARPNSWPWQVSLQYSSNGQWYH 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177 VALPLVTVNQC--RQYWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A, Molecule type: mRNA
A; Residues: 1-269 < KAM>
A; Residues: 1-269 < KAM>
A; Cross-references: GB: M16653; NID:g182059; PIDN: AAA52381.1; PID:g182060
C; Superfamily: trypsin; trypsin homology
C; Reywords: hydrolase; serine proteinase
F; 1-16/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                              2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQD-SSG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14;
                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F:17-28/Domain: propeptide #status predicted <PRO>
F:29-269/Product: panoreatic elastase IIB #status predicted <MAT>
F:29-262/Domain: trypsin homology <TRY>
F:73,121,216/Active site: His, Asp, Ser #status predicted
                                                                                                                                                               35.9%; Score 438; DB 1; Length 271; 41.8%; Pred. No. 1.2e-29; Live 36; Mismatches 91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91; Indels
F;1-16/Domain: signal sequence #status predicted <SIG>F:17-30/Domain: activation peptide #status predicted <APT>F:31-271/Product: elastase II #status predicted <MPT>F:31-254/Domain: trypsin homology <TRY>F:31-264/Domain: trypsin homology <TRY>F:75,123,218/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Accession: Č26823
Kawashima, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
NA 6, 163-172, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 427; DB 2,
Pred. No. 1e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35.0%;
                                                                                                                                                                                                                         Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
```

RESULT 15 A29934

q

ð

g

ò 셤 ò 

```
A;Accession: JX0045
A;Molecule type: mRNA
A;Residues: 1-240, 'G', 242-270 <SHI>A;Cross-references: GB:D00306; NID:g220013; PIDN:BAA00212.1; PID:g220014
C;Comment: This enzyme is an alanine-specific serine proteinase that has little elast C;Genetics:
C;Species: Homo sapiens (man)
C;Date: 15-Dec-1988 #text_change 20-Jun-2000
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 20-Jun-2000
C;Accession: A29934; JX0045
R;Tani, T.; Ohsumi, J.; Mita, K.; Takiguchi, Y.
J Biol, Chem. 263, 1231-1239, 1988
A;Title: Identification of a novel class of elastase isozyme, human pancreatic elasta A;Reference number: A92664; MUID:880087253; PMID:2826474
                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:J03516
R;Shirasu, Y.; Takemura, K.; Yoshida, H.; Sato, Y.; Iijima, H.; Shimada, Y.; Mikayama J. Biochem. 104, 259-264, 198
A;Title: Wolecular cloning of complementary DNA encoding one of the human pancreatic A;Reference number: JX0045; MUID:89034017; PMID:2460440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             α
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNKTPCYITGWGRLYTNGPL-PDK 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58 HFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVS--RAITHPSWNS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 TIM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LQQVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 MLRLLSSLLLVAVASGYG-----PPSSHSSSRVVHGEDAVPYSWPWQVSLQYEKSGSFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Superfamily: trypsin; trypsin homology cc; Superfamily: trypsin; trypsin; boundary specifical cc; Keywords: hydrolase; pancraes; serine proteinted cSIG> F;1-15;/Domain: signal sequence #status predicted cSIG> F;16-28/Domain: propeptide #status predicted cPRO> F;29-270/Product: pancreatic elastase IIIA #status experimental cMAT> F;29-263/Domain: trypsin homology CTRY> F;29-263/Domain: trypsin homology CTRY> F;73,123,217/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Genetics:
A;Introns: 15/1; 43/3; 76/2; 121/2; 167/1; 214/3; 265/3
C;Superfamilly: tryosin. truncin house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 34.4%; Score 420.5; DB 2; Best Local Similarity 40.7%; Pred. No. 3.6e-28; Matches 98; Conservative 35; Mismatches 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Search completed: December 20, 2002, 15:19:47 Job time : 15.6087 secs
```

The State of the S

```
LENGTH: 230 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                         US-08-944-483-62
                                                                                                                                                                                                                                                                                                                                                                               STATE: I
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                               STREET:
CITY: Ab
TELEX:
(without alignments)
519.349 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           10,
10,
10,
10,
10,
10,
                                                        December 20, 2002, 15:14:53 ; Search time 13.087 Seconds
                                                                                                   1252
1 IVNGENAVPGSWPWQVSLQD......AMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                          /cgn2_6/ptodata/1/laa/5A_COMB.pep:*
/cgn2_6/ptodata/1/laa/5B_COMB.pep:*
/cgn2_6/ptodata/1/laa/6B_COMB.pep:*
/cgn2_6/ptodata/1/laa/6B_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
       GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-472-173-10
US-08-487-167-10
US-08-487-167-10
US-08-296-149-10
US-08-801-499-10
US-08-615-271-10
US-09-074-666-10
US-09-074-669-10
US-09-074-669-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-106-466A-10
US-09-106-467-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S-08-750-711-1
S-08-643-219-1
S-08-851-350-1
S-08-456-840-47
                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-266-407A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-154-344-13
US-08-278-091-10
US-08-483-859-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-766-982-12
                                                                                                                                                     262574 segs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                          US-09-856-319B-4_COPY_34_264
                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                        - protein search, using sw model
                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                   Issued_Patents_AA:*
                                                                                                                                                                                     Minimum DB seq length: 0 Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                      Query
                                                                                                                                                                                                                                                                                                                                                                                               9474777777777777888989
                                                                                           Title:
Perfect score:
                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481.5
466.5
465.5
464.5
464.5
464.5
                                                                                                                                                                                                                                                                                                                                                                                               750.5
750.5
750.5
737
737
                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein
                                                                                                            Sequence:
                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                  Database
                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                           œ.
```

```
Sequence 62, Application US/08944483

Sequence 62, Application US/08944483

Sequence 62, Application US/08944483

Sequence 62, Application US/08944483

Setent No. 6232456

GENERAL INFORMATION:

APPLICANT: COMPAN, PAULA N.

APPLICANT: GRANANOS, EDWARD N.

APPLICANT: STEARRY, KENT D.

APPLICANT: STEARRY, KENT D.

TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS

TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS

TITLE OF INVENTION: OF THE PROSTATE

NUMBER OF SEQUENCES: 76

CORRESPONDENCE ADDRESS:
                                           Sequence 54, Appl
Sequence 54, Appl
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
                                                                  54, Appli
1, Appli
1, Appli
1, Appli
2, Appli
                                                                                                                                                      29, Appl
1, Appli
5200340
                                                                                                                                                                                                       Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                   Sequence 1, A
     Sequence
                                      Patent No.
US-08-944-483-53
US-09-296-219-12
52003-66-219-12
US-08-469-486-54
US-08-486-54
US-09-131-955-1
US-09-132-154-1
US-09-132-154-1
US-09-132-154-1
US-08-132-154-1
US-08-132-154-1
US-08-147-0008-29
US-08-147-0008-29
US-08-65-148-1
US-08-451-932-1
US-08-451-932-1
US-08-451-932-1
US-08-451-932-1
US-08-451-932-1
US-08-451-932-1
US-08-605-5988-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: ISKette
COMPUTER: ISK COMPATIBLE
OPERATING SYSTEM: DOS
SOFTWARE: FRALSED for Windows Version 2.0
CURRENT APPLICATION DATA
APPLICATION NUMBER: US/08/944,483
                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6183.US.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEE: Abbott Laboratories
: 100 Abbott Park Road
Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
   2330
2330
2330
2330
7390
7391
7391
7391
7391
810
810
812
812
812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60064-3500
```

```
Tanimoto, Hirotoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (212) 819-87
TELEFAX: (212) 354-8113
                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New York
: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: New York
STATE: New York
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 10036-2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
US-08-557-146-13
                                                                                                                                                                                                       SEQ ID NO 6
LENGTH: 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: O'Brien, Timothy J.
APPLICANT: Tanimoto, Hirotoshi
TITLE OF INVENTION: TANG-15: An Extracellular Serine Protease Overexpressed in TITLE OF INVENTION: Breast and Ovarian Carcinomas
FILE REFERENCE: D6064
CURRENT APPLICATION NUMBER: US/09/027,337B
CURRENT FILING DATE: 1998-02-20
NUMBER OF SEQ ID NOS: 13
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Serine protease catalytic domain of chymotrypsin (Chymb); OTHER INFORMATION: homologous to similar domain in TADG-15
US-09-027-337-6
                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                   SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                        60 SDEENIQVLKIAKVEKNPKFSILTVNNDITLIKLATPARFSQTVSAVCLPSADDDFPAGT 119
                                                                                                                                                                                                                                                                            121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                 61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                            Gaps
                                                                                                                              1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                   1 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                            <del>.</del>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59.9%; Score 750.5; DB 2; Length 231; 58.0%; Pred. No. 4.3e-64; Live 35; Mismatches 61; Indels 1
                                                       DB 4; Length 230;
                                                                                                                                                                                                                                                                                                                                                                      SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61; Indels
                                                   59.9%; Score 750.5; DB 4 58.0%; Pred. No. 4.3e-64; iive 35; Mismatches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-027-337-6; Sequence 6, Application US/09027337B; Patent No. 5972616; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/09644600 Patent No. 6451500 GENERAL INFORMATION:
No. 6232456e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: O'Brien, Timothy J.
                                                   Query Match 59.9%
Best Local Similarity 58.0%
Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 59.9
Best Local Similarity 58.0
Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Unknown
 MOLECULE TYPE:
 ; MULECULE
US-08-944-483-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-644-600-6
                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                               a
                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 LCATTGWGKTKYNANKTPDKLQQAALPLLSNAECKKSWGRRITDVMICAGASGVSSCMGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Bgelrud, Torbjorn
APPLICANT: Hansson, Lennart
TITLE OF INVENTION: Recombinant Stratum Corneum Chymotryptic
TITLE OF INVENTION: Enzyme (SCCE)
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: White & Case, Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease TITLE OF INVENTION: Overexpressed in Carcinomas FILE REFERENCE: D6064CIP/D
CURRENT APPLICATION NUMBER: US/09/644,600
CURRENT FILING DATE: 2000-08-23
PRIOR APPLICATION NUMBER: 09/421,213
PRIOR FILING DATE: 1999-10-20
PRIOR FILING DATE: 1998-10-20
PRIOR FILING DATE: 1998-02-20
NUMBER OF SEQ ID NOS: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/557,146
FILING DATE: 14-DEC-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Sterner, Richard J.
REGISTRATION NUMBER: 35,372
REGISTRATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 1103326-181
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 59.9%; Score 750.5; DB 4;
Best Local Similarity 58.0%; Pred. No. 4.3e-64;
Matches 134; Conservative 35; Mismatches 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: White & Case, Patent Department 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 13, Application US/08557146
Patent No. 5834290
                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Chymotrypsin US-09-644-600-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
```

ij

```
SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                      1 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRIS-DVVVAGEFDQG 59
                                                                                                                                                                                                     1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                            TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD
                                                                                                                                                 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٠.
ص
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                        Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/278,091
FILING DATE: 21-JUL-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
APPLICANT: TANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Reymond P.
APPLICANT: MICHEL, MI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 724.5; DB 1
Pred. No. 1.3e-61;
                                                                                     Score 737; DB 2;
Pred. No. 8.3e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Slin & Meburney
STREET: Suite 701, 330 University Avenue
                                                                                                                                              36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10, Application US/08278091
Patent No. 5506139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57.9%;
57.1%;
                                                                                  58.9%;
ilarity 57.6%;
Conservative 3
; MOLECULE TYPE: polypeptide US-09-154-344-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
Best Local Similarity 57.1%
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESS: single
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Toronto
STATE: Ontario
COUNTRY: Canada
ZIP: M5G 1R7
                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
US-08-278-091-10
                                                                                                                                              Matches 133;
                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lennart
Recombinant Stratum Corneum Chymotryptic
Enzyme (SCCE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |||||||||| || ||||||||| || SGGPLVCQKDGAWTLVGIVSMGSDTCSTSSPGVYARVTKLIPWVQKILAAN 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                            Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/154,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 13, Application US/09154344

Patent No. 5981256

GENERAL INFORMATION:
APPLICANT: Egelrud, Torbjorn
APPLICANT: Hansson, Lennart
TITLE OF INVENTION: Recombinant Stratum Corneum
TITLE OF INVENTION: Recombinant Stratum Corneum
TITLE OF INVENTION: Enzyme (SCCE)
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESSE:
ADDRESSEE White & Case, Patent Department
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                      58.9%; Score 737; DB 2;
1larity 57.6%; Pred. No. 8.3e-63;
Conservative 36; Mismatches 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1103326-181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/557,146
FILING DATE: 14-DEC-1995
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UMBER: US/09/154,344
16-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Sterner, Richard J.
REGISTRATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 111
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (212) 819-8783
TELEFAX: (212) 354-8113
INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: polypeptide
US-08-557-146-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                      : 229 amino acids
amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 229 amino acids
TYPE: amino acids
STRANDEDNESS: single
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                        SEQUENCE CHARACTERISTICS LENGTH: 229 amino act
                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : New York
'RY: U.S.A.
10036-2787
                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 133; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New York
                                                                                  TYPE: amino & STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
US-09-154-344-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

'n

```
61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
               SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                     TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                 1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
ښ
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: CHONG, Pele APPLICANT: COMEN, Raymond P.
APPLICANT: COMEN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 228;
                                                                                                                                                                                            SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE PATENTIN STATEM.
SOFTWARE PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/472,173
FILING DATE: 07-JUN-1995
CLASSIFICATION 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57.9%; Score 724.5; DB 1
57.1%; Pred. No. 1.3e-61;
iive 34; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1038-493 MIS:vg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                        Sequence 10, Application US/08472173 Patent No. 5665353
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: LOOSMORE, Sheena M
APPLICANT: YANG, Yan-Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 57.9%
Best Local Similarity 57.1%
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: Suite 70
CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: LOOSMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                          US-08-472-173-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-472-173-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                       9
                                                                                                                                                                        181
                 61
                                                                                             121
                                                                                                                                                                                                              178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                       g
                                                                                               ò
                                                                                                                             Q
                                                                                                                                                                        ŏ
                                                                                                                                                                                                          g
                     ò
                                                         SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                               121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with TITLE OF INVENTION: Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 228;
                                                                                                                                                                                                                                      SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,859
FILING DATE: O'-JUN-1995
CLASSIFICATION 35
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: O'-JUN-1994
PRIOR APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEX/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Score 724.5; DB 1
; Pred. No. 1.3e-61;
34; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 1038-495 MIS:vg TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                           Sequence 10, Application US/08483859
Patent No. 5656436
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24,973
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: YANG, Yan-Ping
APPLICANT: GRONG, Pele
APPLICANT: OOMEN, RAYMOND P
APPLICANT: KLEIN, Michel H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1153
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.9%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Stewart, Michael I REGISTRATION NUMBER: 24,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: Canada
ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Flopm:
COMPUTER: TP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 57.18
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; STRANDEDNESS: Single
; TOPOLOGY: linear
US-08-483-859-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                 US-08-483-859-10
                                                           Ę
                                                                                                 9
                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                      178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                    q
                     셤
                                                           ò
                                                                                                 g
                                                                                                                                     à
                                                                                                                                                                        g
                                                                                                                                                                                                                õ
```

ж ;

Gaps

```
24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID 0: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : 228 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Stewart, Michael
REGISTRATION NUMBER: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                               'RY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 132; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                             STREET: Suite 70
CITY: Toronto
STATE: Ontario
COUNTRY: Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY:
US-08-482-816-10
                                                                                                                                                                     RESULT 10
US-08-482-816-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                g
                                                                                   ò
                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 228;
                                                                                                                                     SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: TANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47
ITLE OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 57.9%; Score 724.5; DB 2; Best Local Similarity 57.1%; Pred. No. 1.3e-61; Matches 132; Conservative 34; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 1038-508 MIS:vg
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION: 433
PRIOR APPLICATION: 433
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,167
FILING DATE: 07-UN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                     Sequence 10, Application US/08487167
Patent No. 5869302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Stewart, Michael I. REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                181
                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                 윱
                                                                                g
                                                                                                                ò
                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                 õ
```

```
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
APPLICANT: TANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OWEN, Raymond P.
APPLICANT: Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with Reduced Protease A
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim 6 McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ICVTIGWGRISGVGNVTPARLQQVVLPLVIVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 228;
                                                                                           181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IDAM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,816
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.9%; Score 724.5; DB 2
57.1%; Pred. No. 1.3e-61;
iive 34; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRICR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-UUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                Sequence 10, Application US/08482816
Patent No. 5935573
```

```
ZIP: M5G 1R7
COMPUTER REDABLE FORM:
MEDIUM TYPE: Florm:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY:
US-08-801-499-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ښ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDGG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |::| :| || || :: : :|: ||:|||:|||||: : :| SSSEKIQKLKIAKVFKNSKYNSLTINNDITLIKLSTAASFSQTVSAVCLPSASDDFAAGT
                                                                                                                                                                                                                          APPLICANT: LOOSMORE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: COMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
                                                         181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: M5G IR7
CMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ouery Match 57.9%; Score 724.5; DB 2;
Best Local Similarity 57.1%; Pred. No. 1.3e-61;
                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34; Mismatches
                                                                                                                                                                   Sequence 10, Application US/08296149 Patent No. 5939297 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REPERENCE/DOCKET NUMBER: 103
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS ADDRESSEE: Sim & MCF
                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
US-08-296-149-10
                                                                                                                                                     US-08-296-149-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                    RESULT 11
 a
a
                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
APPLICANT: YANG, YAN-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with Reduced Protease A
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLEACHTING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PACENTIN Release #1.0, Version #1.25 CURREWY APPLICATION DATA: APPLICATION NUMBER: US/08/801,499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 08/482,816
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION UNBER: US 08/278,091
FILING DATE: 21-UL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTATION NUMBER: 24,973
REGISTATION NUMBER: 1038-671 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.9%; Score 724.5; DB 57.1%; Pred. No. 1.3e-61
                                                                                                                                                                                                                                                                                                    ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34; Mismatches
Sequence 10, Application US/08801499
Patent No. 5962430
GENERALINFOMMATION:
APPLICANT: LOOSMORE, Sheena M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEGUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 57.9%
Best Local Similarity 57.1%
Matches 132; Conservative
```

RESULT 13

RESULT 12

```
60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
               Analog of Haemophilus Hin47 Protein with
Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 3; Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                              PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57.9%; Score 724.5; DB 3;
ilarity 57.1%; Pred. No. 1.3e-61;
Conservative 34; Mismatches 62;
                                                                                                 ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toxonto
STATE: Ontario
COUNTRY: Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1038-731 MIS: jb
                                                                                                                                                                                                                                                                                                                                                                                                FILING LAWLE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/487,167
FILING DATE: U7 JUN-1995
PRIOR APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING JOATE: 21-JUL-1994
ATTORNEY APPLICATION NUMBER: 1394
ATTORNEY ATTORNEY MARE: SLOWALTION:
NAME: SLOWART INFORMATION:
TELEPHONE: (416) 595-1153
TELEPHONE: (416) 595-1163
TELEPHONE: (416) 595-1163
TELEPHONE: (416) 595-1163
TELEPHONE: CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,660
                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10, Application US/09074659
Patent No. 6025342
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: ANG, Yan-Ping
APPLICANT: CHONG, Pele
KLEIN, Michel H.
                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                    CORRESPONDENCE ADDRESS:
                                                           NUMBER OF SEQUENCES:
                  TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 132; Conserv
                                                                                                                                                                                                                 ZIP: M5G 1R7
                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-074-659-10
                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                        APPLICANT: LOGSWORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OOMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: ANALOG OF HAEMOPHILUS HIN47 WITH REDUCED
TITLE OF INVENTION: PROTEASE ACTIVITY
WUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: SIM & MCBUINEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       SUFTWARE: Datentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/615,271 FILING DATE: US/08/615,271 ATTONEX/AGENT :: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57.9%; Score 724.5; DB 2
57.1%; Pred. No. 1.3e-61;
tive 34; Mismatches 62
                                                                                                                                                                                                                                                                            E: Sim & McBurney
6th Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10, Application US/09074660 Patent No. 6020183
             Sequence 10, Application US/08615271
Patent No. 5981503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 57.1%
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                   STREET: 6th Floc
CITY: Toronto
STATE: Ontarlo
                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: Canada
ZIP: MSG 1R7
                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-615-271-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

ò

ñ

```
3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178 SGGPLVCKKNGAWTLVGIVSWGSSTCSTSTPGVYARVTALVNWVQQTLAAN 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62; Indels
                                                                                                                                                          STATE: Ontario
CONTRY: Canada
ZIP: MSG 1R/
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 724.5; DB 3 Pred. No. 1.3e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57.9%; Scor.
57.1%; Pred. No. 1....
34; Mismatches
                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION:
PRIOR APPLICATION NUMBER: US 08/487,167
FILING DATE: 07-JUN-1995
PRIOR APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGIH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 57.9%
Best Local Similarity 57.1%
Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGIH: ....
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TOPOLOGY:
US-09-074-659-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

Search completed: December 20, 2002, 15:20:39 Job time : 14.087 secs

P27435 rattus norv P00762 rattus norv Q950343 rattus norv Q95037 gallus gall P80010 equus cabal P06871 canis famil Q90628 gallus gall P06872 canis famil P00773 rattus norv P21845 mus musculu

MCT7_RAT MCT6_RAT MCT6_RAT TMS2_MOUSE TRY1_CHICK PLM_HORSE TRY1_CHICK TRY2_CHICK TRY2_CHICK TRY2_CANFA TRY2_CA

ġ

```
334
334
44
44
54
54
54
54
54
                                                                                                   December 20, 2002, 15:12:58 ; search time 7.91304 Seconds (without alignments) 1210.790 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                US-09-856-319B-4_COPY_34_264
1252
1 IVNGENAVPGSWPWQVSLQD......AMYTRVSKFSTWINQVMAYN 231
            GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                           112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                         OM protein - protein search, using sw model
                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SwissProt_40:*
                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                            Searched:
                                                                                                        Run on:
```

ALIGNMENTS

Description	P40313 homo saplen	canis	gadus		bos		P07338 rattus norv	P80646 gadus morhu	6	P00774 rattus norv	pos	P08217 homo sapien	homo	pos 1	แกรา	P00747 homo sapien	u snw	P09093 homo sapien		Q9es87 rattus norv	P57727 homo sapien	-	P81286 ovis aries	P12545 macaca mula	P06867 sus scrofa	homo	-	Q16651 homo sapien	Q99895 homo sapien	P55091 rattus norv	Q02844 mus musculu	Q9esd1 mus musculu	sns
ΙD	CTRL_HUMAN	CTR2_CANFA	CTRA_GADMO	CTRB_HUMAN	CTRB_BOVIN	CTRA_BOVIN	CTRB_RAT	CTRB_GADMO	EL2_PIG	EL2_RAT	CAC3_BOVIN	EL2A_HUMAN	EL3B_HUMAN	EL2_BOVIN	EL2_MOUSE	PLMN_HUMAN	PLMN_MOUSE	EL3A_HUMAN	TRYT_MERUN	PSS8_RAT	TMS3_HUMAN	TRYT_PIG	PLMN_SHEEP	PLMN_MACMU	PLMN_PIG	EL2B_HUMAN	PLMN_CANFA	PSS8_HUMAN	CLCR_HUMAN	CLCR_RAT	MCT7_MOUSE	PSS8_MOUSE	TRYP_PIG
DB	-	-	Н	-	-1	Н	-	-	-	ч	_	-	-	-	7	٦	П	-	-	-	-	-	-			Н	Н	-	-	-	-	-	-
% Query Match Length	264	263	263	263	245	245	263	245	269	271	253	269	270	269	271	810	812	270	270	342	424	275	343	810	790	269	333	343	268	268	273	342	231
% Query Match	89.4		59.9	-	-	-	-	-				-								36.4													
Score	; =	757.5	750.5	750.5	740.5	727.5	715.5	714.5	503	499	497.5	486	481.5	480	475	464.5	462	459.5	455.5	455.5	455	452.5	452.5	451.5	449.5	4			•	٠	47.	447.5	444
Result No.	;	7	m	4	_C	9	7	œ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	53	30	31	32	33

SUMMARIES

SUL RL	HUMAN HUMAN CTRL_HUMAN	STAN	STANDARD;	PRT; 264	ments 264 AA.		
 DII OOL	P40313; 01-FEB-1995 (Rel. 31, Creat 01-FEB-1995 (Rel. 31, Last 15-JUN-2002 (Rel. 41, Last Chumotyniain: 1the professor	(Rel. 3 (Rel. 3 (Rel. 4	31, Created) 31, Last seq 41, Last ann	Created) Last sequence update) Last annotation update)	Ψ	)) /EC 3 4 21 - )	
	CTRL OR CTRL1.  CTRL OR CTRL1.  Homo sapiens (Human)  Eukaryota; Metazoa;  Mammalia; Eutheria;  NCBI_TaxID=9606;	1. (Human (etazoa; theria; 606;	ocease ). Chordat Primate	ciki'i pr a; Crania s; Catarr	ta; Verte	griff v	
RRY RRY RY	[1] SEQUENCE FROM N.A SEQUENCE-94093544; PubMed-8268911; LATSEN F., Solheim J., Kristensen T., Kolsto A. "A tight cluster of five unrelated human genes 16q22.1."; Hum. Mol. Genet. 2:1589-1595(1993).	M N.A 3544; P Colheim ster of net. 2:	ubMed=82 J., Kris five un 1589-159	68911; tensen T. related h 5(1993).	, Kolsto uman gene	[1]  SEQUENCE FROM N.A  MEDLINE-94093544; PubMed-8268911;  LATSEN F., Solheim J., Kristensen T., Kolsto A.B., Prydz H.;  Larsen F., Solheim J., Kristensen T., Kolsto A.B., Prydz H.;  "A tight cluster of five unrelated human genes on chromosome 16q22.1.";  Hum. AOI. Genet. 2:1589-1595(1993).	
	This SWISS-PROT entry is copyright. between the Swiss Institute of Bio the European Bloinformatics Institute by non-profit institutions a modified and this statement is not entities requires a license agreement send an email to license@isb-sib.	ROT ent Swiss Bloinf Profit this s	ry is co Institut ormatics instit tatement license	pyright. e of Bioi Institut utions as is not r agreemen	It is produced to informatics and e. There are no long as its co emoved. Usage t (See http://ww.ch).	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).	tion on - its way cial
	EMBL; X71874; CAA50710.1; EMBL; X71877; CAA50711.1; HSSP; P00763; 1DPO. MEROPS; SOI.256; Genew; HGNC:2524; CTRL. MIM; 118888;	CAA50; CAA50; 1DPO.	710.1; 711.1; 711.1; TRL.	74; CAA50710.1; 77; CAA50711.1; 63; 1DP0. 1.256; 6:224; CTRL. 8; 63; 63; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64; 64	1 1 1 1 1 1		!
	InterPro; IrWoulsis; Cnymocrypsin. InterPro; IPR001254; Ser_protease_Try Pfam; PF00089; trypsin; 1. PRINTS; PR00722; CHYMOTRYPSIN. SMART; SM00020; Tryp_SPC; 1. PROSITE; PS50240; TRYPSIN.DOM; 1. PROSITE; PS00134; TRYPSIN.DOM; 1.	; IPR001314 ; IPR001254 )00089; tryp PR00722; CH M00020; Try PS50240; T PS00134; T	4; Cnymotryp 74; Ser_prote 78in; 1. 78in; 1. 79_SPC; 1. TRYPSIN_DOM; TRYPSIN_DOM;	rypsin. otease_Tr in. OM; 1.	· *		
	Hydrolase; Serine Signal Phydrolase; Serine Signal 19 Stopep 19 ACT_SITE 75 ACT_SITE 121 ACT_SITE 121 ACT_SITE 114 DISULFID 19 DISULFID 155 DISULFID 155 DISULFID 155 DISULFID 160	(erine p 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	profess; profess; 18 23 - 23 - 121 121 121 141 141 141 141 161 161 161 161 161 16	Glycoprotein; Glycoprotein; POTENTIAL. POTENTIAL. CHARGE RELAY CHARGE RELAY CHARGE RELAY CHARGE RELAY N-LINKED (GLC BY SIMILARITY BY SIMILARITY BY SIMILARITY BY SIMILARITY	1 ycoprotein; Zymogee POTENTIAL. POTENTIAL. POTENTIAL. CHARGE RELAY SYSTEM CHARGE RELAY SYSTEM CHARGE RELAY SYSTEM CHARGE RELAY SYSTEM N-LINKED (GLCNAC. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY.	1ycoprotein; Zymogen; Signal. POTENTIAL. POTENTIAL. CHARTIVATION PEPTIDE (POTENTIAL). CHYMOTRYDSIN-LIKE PROTEASE CTRL-1. CHARGE RELAY SYSTEM (BY SIMILARITY). CHARGE RELAY SYSTEM (BY SIMILARITY). N-LINKED (GLCNAC) (POTENTIAL). BY SIMILARITY. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY.	

```
CTRA_GADMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
    821111111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to licenseeisb-sib.ch).
                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                               TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                               Gaps
                                                                                                                                                                                1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIINE-84170253; PubMed-6584866;
Pinsky S.D., Laforge K.S., Luc V., Scheele G.;
"Identification of CDNA clones encoding secretory isoenzyme forms:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoà; Ćĥordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
NCBL_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
PRIMITS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SS50240; TRYPSIN_LDOM; 1.
PROSITE; PS00134; TRYPSIN_LS; 1.
PROSITE; PS00135; TRYPSIN_LS; 1.
PROSITE; PS00135; TRYPSIN_LS; 1.
PROSITE; PS00135; TRYPSIN_LSER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence determination of canine pancreatic prechymotrypsinogen
                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                             10; Indels
  BY SIMILARITY.
3F629F02FA6DDFB4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHYMOTRYPSIN 2, A CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl. Acad. Sci. U.S.A. 80:7486-7490(1983)
                                                                 89.4%; Score 1119; DB 1; 86.1%; Pred. No. 3.1e-93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHYMOTRYPSINGEN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-AGG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen 2 precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 AA
                                                                                                             22; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phe-|-Xaa, Leu-|-Xaa.
SUBCELLULAR LOCATION: Extracellular.
                    28002 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; K01173; AAA30841.1; -.
                                                                                                             Matches 199; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Canis familiaris (Dog)
210 ,
264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR; A21195; A21195
HSSP; P00766; 1ACB.
                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTR2_CANFA P04813;
DISULFID
SEQUENCE
                                                                   Query Match
                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTR2_CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA.
                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
                                                                                          Best
                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HID DAY NAME REPORTED BY THE PROPERTY OF THE P
                                                                                                                                                                                                                                                    δ
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation the Buropean Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         153 LCVTTGWGLTKHTNANTPDKLQQAALPLLSNAECKKFWGSKITDLMVCAGASGVSSCMGD 212
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                             Asgeirsson B., Bjarnason J.B.;
"Structural and Kinetic properties of chymotrypsin from Atlantic cod (Gadus morhua). Comparison with bovine chymotrypsin.";
-!- Comp. Biochem. Physiol. 998:37-335(1991).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.";
Biochim. Biophys. Acta 1219:211-214(1994).
                                                                                                                                                                                                                                                                          Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gudmundsdottir A., Oskarsson S., Eakin A.E., Craik C.S.,
                                                                                                            3Y SIMILARITY.
3Y SIMILARITY.
3Y SIMILARITY.
3Y SIMILARITY.
3Y SIMILARITY.
2A2F449D813B3961 CRC64;
CHYMOTRYPSIN 2, B CHAIN.
CHARGE RELAX SYSTEM.
CHARGE RELAX SYSTEM.
CHARGE RELAX SYSTEM.
CHARGE RELAX SYSTEM.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                   61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                              Score 757.5; DB J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FUN-2002 (Rel. 41, Last annotation update)
Chymotrypsin A precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                 ; Pred. No. 7.7e-
35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=92111252; PubMed=1764912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Pyloric caeca;
MEDLINE-94368860; PubMed-8086467;
                                                                                                                                                                                                                              27787 MW;
                                                                                                                                                                                                                                                                          60.5%; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 19-30 AND 34-49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gadus morhua (Atlantic cod)
                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                  75
213
213
140
76
219
2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Pyloric caeca;
                                                                                                               19
60
154
186
209
263 AA;
                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bjarnason J.B.;
"Atlantic cod c
                                                                                                                                                                                                                                                                                                                      Matches 134;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTRA_GADMO
                           CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                         DISULFID
SEQUENCE
                                                                                                                                          DISULFID
                                                                                                                                                             DISULFID
                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                          Query Match
Best Local
```

```
3iochem. Biophys. Res. Commun. 158:569-575(1989).
                 SEQUENCE FROM N.A.
                           IISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                    ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local
                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                   CHAIN
CHAIN
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTRB_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                         121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                           61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                        IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                 SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia; Eutheria; Primates, Catarrhini; Hominidae, Homo.
NCBI_TaxID=9606,
                                        InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR00125; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_HS; 1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Pancreas;
MEDILINE-89134256; PubMed-2917002;
Tomita N., Izumoto Y., Horii A., Doi S., Yokouchi H., Ogawa M.,
Mori T., Matsubara K.;
"Molecular cloning and nucleotide sequence of human pancreatic
                                                                                                                                                                                                                                                                                    DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                   SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                            62; Indels
                                                                                                                                                                     BY SIMILARITY
C S C NO REF 2)
T -> S (IN REF 2)
T -> S (IN REF 2)
S -> O (IN REF 2)
S -> O (IN REF 2)
S -> Y (IN REF 2)
S -> Y (IN REF 2)
W; 47AAC699A0A64FBB CRC64;
                                                                                                                                              (BY
(BY
(BY
                                                                                                                                    CHYMOTRYPSIN A.
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
                                                                                                                                                                                                                                                                                   ; Score 750.5; DB 1
; Pred. No. 3.3e-60;
33; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
CTymptrypsinogen B precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   263 AA.
send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                  28294 MW;
                                                                                                                                                                                                                                                                                    59.9%;
58.4%;
                 EMBL; X78490; CAA55242.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prechymotrypsinogen cDNA.";
                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                    263
75
120
1120
213
200
238
238
238
24
44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                 263 AA;
                                  MEROPS; S01.152;
                                                                                                                                                                       19
60
154
186
209
                          P00766;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTRB_HUMAN
P17538;
                                                                                                                                                                                                                                                                                                      Matches 135;
                                                                                                                                    CHAIN
ACT_SITE
                                                                                                                                                     ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                             CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                 DISULFID
                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                               Local
                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTRB_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQG 92
Strausberg R.;
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
Hydrolase; Serine procease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4C1C055A490B8701 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHYMOTRYPSINGEN B
                                                           Phe-1-xaa, Leu-1-xaa.
Phe-1-SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.9%; Score 750.5; DB 1
58.0%; Pred. No. 3.3e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MIM; 118890; -
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27870 MW;
                                                                                                                                                                                                                                                                                                                                                                     EMBL; M24400; AAA52128.1; -.
                                                                                                                                                                                                                                                                                                                                                                                            EMBL; BC005385; AAH05385.1;
PIR; A31299; A31299.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEROPS; S01.152; -. Genew; HGNC:2521; CTRB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
19
34
167
75
75
213
19
60
60
154
186
```

```
ACTIVE SITE
                                                                                                                                                                                                                                                                                                                                                                                                                      chymotry
 1;
                                                                                                                                                                                                                           SEQUENCE, DISULFIDE BONDS, AND ACTIVE SITE.
MEDITHE-68238908; bubMed=5649671;
Salillie L.B., Furka A., Magabhushan N., Stevenson K.J., Parkes C.O.;
"Structure of chymotrypsinogen B compared with chymotrypsinogen A and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  trypsinogen.";
Nature 218:343-346(1968).
-!- CATALVIIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                             Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                        Phe-|-xaa, Leu-|-xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- DATABASE: NAME=Worthington enzyme manual;
--- WWW-http://www.worthington-biochem.com/manual/C/CHY.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.1%; Score 740.5; DB 1; Length 245; larity 57.1%; Pred. No. 2.4e-59; Conservative 32; Mismatches 66; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25755 MW; 678016446FF5FEB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS, PRO0722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS50134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Digestion; Pancreas;
                                   21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
245 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001354; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRT;
                                                                                         Chymotrypsinogen B (EC 3.4.21.1).
STANDARD;
                                                                                                                                                                      Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; A00953; KYBOB.
HSSP; P00766; 1ACB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEROPS; S01.152; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                     NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136
168
191
CTRB_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
CTRA_BOVIN
ID CTRA_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Si
Matches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
SOUR PRINTER THE TELEFIEL TO DE LA PROPERTION OF THE PROPERTY 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

245 AA

PRT;

STANDARD;

```
Cohen G.H., Silverton E.W., Davies D.R.;
"Refined crystal structure of gamma-chymotrypsin at 1.9-A resolution. Comparison with other pancreatic serine proteases.";
J. Mol. Biol. 148:449-479(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tsukada H., Blow D.M.;
"Structure of alpha-chymotrypsin refined at 1.68-A resolution.";
"J. Mol. Biol. 184:703-711(1985).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                 Bos taurus (Bovine).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF CHYMOTRYPSINOGEN.
MEDLINE=70177557; PubMed=5442169;
Freer S.T., Kraut J., Robertus J.D., Wright H.T., Xuong N.H.;
"Chymotrypsinogen: 2.5-A crystal structure, comparison with alpha-
chymotrypsin, and implications for zymogen activation.";
Biochemistry 9:1997-2009(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brown J.R., Hartley B.S.;
"Location of disulphide bridges by diagonal paper electrophoresis.
The disulphide bridges of bovine chymotrypsinogen A.";
Biochem. J. 101:214-228(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE, AND DISULFIDE BONDS.

BEDILINE-51183948; PubMed-5972866;
Meloun B., Kluh I., Kostka V., Moravek I., Prusik Z., Vanacek J.,
Keil B., Sorm F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Birktoft J.J., Blow D.M., Henderson R., Steitz T.A., "I. Serine proteinases. The structure of alpha-chymotrypsin."; Philos. Trans. R. Soc. Lond., B, Biol. Sci. 257:67-76(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X-RAY CRYSTALLOGRAPHY (1.68 ANGSTROMS) OF ALPHA-CHYMOTRYPSIN.
MEDLINE-86011575; Pubmed-4046030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF GAMMA-CHYMOTRYPSIN.
MEDLINE-82078042; Pubmed=6914398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smillie L.B., Hartley B.S.;
"Histidine sequences in the active centres of some 'serine'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-69106266; PubMed-5764436;
Blow D.M., Birktoft J.J., Hartley B.S.;
"Role of a buried acid group in the mechanism of action
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hartley B.S.;
"Amino-acid sequence of bovine chymotrypsinogen-A.";
Nature 201:1284-1287(1964).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Covalent structure of bovine chymotrypsinogen A.";
Biochim. Biophys. Acta 130:543-546(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Phe-1-Xaa, Leu-1-Xaa.
-- SUBCELLULBAR LOCATION: EXTRACELIULAR.
-- SIMILARITY: BELONGS TO PEPPIDASE FAMILY S1.
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
21-JUL-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen A (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE, DISULFIDE BONDS, AND ACTIVE SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=67181723; PubMed=5971785;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=72035052; PubMed=4399050;
                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=67181721; PubMed=5971783;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteinases.";
Biochem. J. 101:232-241(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 221:337-340(1969).
                                                                                                                                                                                                                                                                                   Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REVISION TO 102.
                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9913;
```

```
Query Match
                                                                                                                                                                                                                                                                                                     SEQUENCE
            HELIX
                                                                                                                                                                                                                                                                                            HELIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                  TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
CTRB_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
DATABASE: NAME-Worthington enzyme manual;
WWW-"http://www.worthington-biochem.com/manual/C/CHY.html".
A00952; KYBOA.
                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IRR01254; Ser_protrypsin.
InterPro; IRR01254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PR00089; trypsin; 1.
PR00172; CHWOOTRYPSIN.
SNART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_ER; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHYMOTRYPSIN A, A CHAIN.
CHYMOTRYPSIN A, B CHAIN.
CHYMOTRYPSIN A, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4CHA, 29-0CT-85

5CHA, 16-0CT-87

1CHG, 27-JAN-84

1CHO, 16-0CT-97

3GCH, 15-0CT-90

4GCH, 15-0CT-90

6GCH, 15-0CT-90

6GCH, 15-0CT-90

6GCH, 15-0CT-91

1GCH, 22-JUN-94

1GHB, 22-JUN-94

1GCH, 22-JUN-97

1AGC, 12-NOV-97

1AGC, 12-NOV-97

1AGC, 12-NOV-97

1AGC, 12-NOV-97
                    A00952; KYBOA.
2CGA, 15-APR-90.
2CHA; 31-MAY-84.
4CHA; 29-OCT-85.
5CHA; 16-OCT-87.
                  PTR, A009527, KTP
PDB, 2CGA; 15-AP
PDB, 2CGA; 15-AP
PDB, 2CGA; 16-00
PDB, 1CHG, 27-JA
PDB, 1CHG, 27-JA
PDB, 1CHG, 27-JA
PDB, 1CHG, 15-00
PDB, 3GCH, 15-00
PDB, 3GCH, 15-00
PDB, 6GCH, 15-00
PDB, 6GCH, 15-00
PDB, 1GCH, 130-AP
PDB, 1GCH, 31-00
PDB, 1GCH, 32-JU
PDB, 1GCH, 22-JU
PDB, 1GCH, 23-JU
PDB, 1GCC, 23-JU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAND
TURN
TURN
TURN
STRAND
STRAND
STRAND
TURN
STRAND
```

```
61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                 121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                         16 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 74
                                                                                                                                                                                                                                                                                                                                                                              1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                     58.1%; Score 727.5; DB 1; Length 245; 56.7%; Pred. No. 3.5e-58; 1ve 32; Mismatches 67; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDILNE-89054881; PubMed-6209274;
Bell G.I., Quinto Ç., Quiroga M., Valenzuela P., Craik C.S.,
Rutter W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Isolation and sequence of a rat chymotrypsin B gene.";
                                                                                                                                                                                                                                                                                                                    25666 MW; 91A9F28E2F3E3142 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTRB_RAT STANDARD; PRT; 263 AA. 01-APR-1988 (Rel. 07, Created) 01-APR-1988 (Rel. 07, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) 15-JUN-2014 (Rel. 41). CTRB1.
                                                                                                                                                                                                                                                                                                                                                           Matches 131; Conservative
231
234
235
245 AA;
                                                                                                                                                                                                                                                                                                                                                 Local Similarity
```

ä

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245 AA;
                                                                                                                                                                                                                                                                    MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                  16
57
101
195
                                                                                                                                                                                                                                                                                                                                                                                                                                      42
1135
1167
1191
26
28
                                                                                     Hoejrup P.
                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONFLICT
                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
EL2_PIG
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its. use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153 VCATTGWGKTKYNALKTPEKLQQAALPIVSEADCKKSWGSKITDVWTCAGASGVSSCMGD 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
J. Biol. Chem. 259:14265-14270(1984).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                        CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
115-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsin B (EC 3.4.21.1)
Gadus morhua (Allantic cod).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                     PRINTS; PRO072; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
SMART; SF50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LS; 1.
PROSITE; PS00135; TRYPSIN_LS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                             57.1%; Score 715.5; DB 1; Length 263; 55.4%; Pred. No. 4.5e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY.
ACAFDBACF8C4DA6D CRC64;
                                                                                                                                                                                                                                                                                                CHYMOTRYPSINGEN B.
                      Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLUIAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35; Mismatches
                                                                                                                                                                           MENOYS; S01.152; -...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                     34 164
167 263
75 75
76 120
3 213
3 213
140
76 219
200 B
27849 MW; 4
                                                                                                                                                 EMBL; K02298; AAA98732.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 128; Conservative
                                                                                                                                                                                                             Pfam; PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                       1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                209
263 AA;
                                                                                                                                                           PIR; A22658; KYRTB.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTRB_GADMO
P80646;
                                                                                                                                                                                                                                                                                                                                       ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
CTRB_GADMO
                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       213
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC AC DIT DIT DIT DIT OCC OCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
MEDLINE-96439045; PubMed-8841380;
Leth-Larsen R., Asgeirsson B., Thorolfsson M., Noerregaard-Madsen M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-9711125; Pubmed-1764912;
Asgeirsson B., Bjarnason J.B.;
Structural and kinetic properties of chymotrypsin from Atlantic cod (Gadus morbua). Comparison with bovine chymotrypsin.";
Comp. Biochem. Physiol. 998:327-335[1991).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa, Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLUAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 TCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQYWGAR-ITDAMICAGGSGASSC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16 IVINGEBAVPHSWPWQVSLQQSNGFHFCGGSLINENWVVTAAHCNVRT-YHRVIVGEHDKA 74
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
NCBL_TaxID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||:||| |: | || :|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192 MGDSGGPLVCQKDNVWTLVGIVSWGSSRCSVTTPAVYARVTELRGWVDQILAAN 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178 QGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Structure of chymotrypsin variant B from Atlantic cod, Gadus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001252; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; SCOIT STRYPSIN_SER; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVT -> VIS (IN REF. 2).
S -> T (IN REF. 2).
PW -> Y (IN REF. 2).
74FE0D425517AB02 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1e-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 714.5;
Pred. No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biochim. Biophys. Acta 1297:49-56(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26260 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.1%;
55.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 1-12 AND 16-31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57
101
195
121
58
58
                                                                                                                                                                                                                                                                                                    TISSUE=Pyloric caeca;
```

ر. م

```
Query Match
                                                                                                                                                                           116
                                                                                                                                             83
                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                     g
                                                                                                                ò
                                                                                                                                           g
                                                                                                                                                                        ò
                                                                                                                                                                                                    g
                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                         -i- FUNCTION: ACTS UPON ELASTIN.
-i- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- TISSUE SPECIFICITY: PANCREAS.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                          Kawashima I., Tani T., Shimoda K., Takiguchi Y., Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are expressed in human pancreas.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                    Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N.,
Shimada Y., Ozawa T., Mikayama T., Iijima H., Ishida A., Sato Y.,
Tamai Y., Tanaka J., Ikenaga H.;
                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                 Tamai Y., Tanaka J., Ikenaga H.; "Molecular cloning and expression in Escherichia coli of a cDNA encoding human pancreatic elastase 2."; J. Blochem. 102:1555-1563(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 -> S (IN REF. 2).
1 -> K (IN REF. 2).
2 -> Y (IN REF. 2).
1 -> V (IN REF. 2).
2 -> V (IN REF. 2).
3 -> V (IN REF. 2).
BAC6FE69AF4DDE56 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTIVATION PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
L -> S (IN REF. 2
N -> K (IN REF. 2
                         11-AUG-1988 (Rel. 08, Created)
11-AUG-1988 (Rel. 08, Last sequence update)
5-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00144; TRYPSIN_LOM; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Zymogen; Signal.
 269 AA
                                                                                                                                                                                                                                                                                                                                                                                                                       and Phe-1-Xaa. Hydrolyzes elastin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                     Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-87217962; PubMed-3646943;
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-88198076; Pubmed-2834346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M16651; AAA31027.1; -.
EMBL; D00237; BAA00166.1; -.
PIR; A26823; A26823.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202
28699
STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P00763; 1DF
MEROPS; S01.155;
                                                                                                Sus scrofa (Pig)
                                                                                                                                          NCBI_TaxID=9823;
                            01-AUG-1988
                                        01-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -i- TISSUE SPECIFICITY: PANCREAS.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                           58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174 -ASSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         208 IISSCNGDSGGPLNCQGANGQWQVHGIVSFGSSLGCNYYHKPSVFTRVSNYIDWINSVIA 267
                                                                                             Gaps
                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pancreas.";
J. Biol. Chem. 259:14271-14278(1984).
1- FUNCTION: ACTS UPON ELASTIN.
1- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-|-Xaa. Hydrolyzes elastin.
1- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nikovits W., Rutter W.J.;
"Primary structure of two distinct rat pancreatic preproelastases determined by sequence analysis of the complete cloned messenger
                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'Structure of the two related elastase genes expressed in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-82182967; PubMed-6918221;
McDonald R.J., Swift G.H., Quinto C., Swain W., Pictet R.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEGUENCE FROM N.A.
MEDILNE-86054882; Pubmed-6094548;
SWIFL G.H., Craik C.S., Stary S.J., Quinto C., Lahaie R.G.,
Rutter W.J., Macdonald R.J.;
              Length 269;
                                                                                             82; Indels
                      DB 1;
40.2%; Score 503; DB 1;
44.2%; Pred. No. 5.1e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                         41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L00124; AAA98780.1; -. L00118; AAA98780.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ribonucleic acid sequences.";
Biochemistry 21:1453-1463(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last seq
15-JUN-2002 (Rel. 41, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; V01233; CAA24543.1; -. EMBL; L00124; AAA98780.1; -.
                                                                                      Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268 NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EL2_RAT
P00774:
                                                        Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DATA BARANA BARA
```

```
172 SGASSCQGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 DRS--SNAEPVQVLSIARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72 DRSVLEGSEQVIPINAGDLFVHPLWNSNCVACGNDIALVKLSRSAQLGDKVQLANLPPAG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
"Autolysis of proproteinase E in bovine procarboxypeptidase A ternary complex gives rise to subunit III."; FEBS Lett. 277:37-41(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57
                                                                                                                                                                                                                                                                           A TRAICERSTANDANCE TO THE TOTAL CATABLE CONTROLL OF THE TRAICE CONTROLL OF THE TRAICE CONTROLL OF THE TRAICE CONTROLL OF THE TRAICE OF THE TRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           132 DILPNEAPCYISGWGRLY-TGGPLPDKLQQALLPVVDYEHCSQWDWWGITVKKTMVCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 253;
                                                                                                                                .;
G
                                                                                                                                P., Laurent G. subunit III, a pancreatic 6 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Digestion; 3D-structure
                                                                                                                                                                      defective endopeptidase present in the bovine pancreatic procarboxypeptidase A complex."; Eur. J. Biochem. 157:91-99(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27337 MW; 24663724D8AE409C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39.7%; Score 497.5; DB 1; ilarity 43.6%; Pred. No. 1.5e-37; Conservative 36; Mismatches 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTIVATION PEPTIDE.
PROPROTEINASE E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _{\rm S1}
                                                                                     SEQUENCE OF 14-253, AND DISULFIDE BONDS.
MEDLINE-86220198; PubMed=3512015;
Venot In Sciaky M., Puigserver A., Desnuelle
"Amino acid sequence and disulfide bridges of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SUBCELLULAR LOCATION: Extracellular.
-!- TISSUE SPECIFICITY: PANCREAS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPR001314; Chymotrypsin.
Interpro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Serine protease homolog; Pancreas; Digest
PROPEP
                                                                                                                                                                                                                                                                X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
103
206
187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR; A25065; CPBOA3.
PDB; 1FON; 14-OCT-96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
171
196
253 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEROPS; S01.983; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        229 AYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Sim
Matches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251 ASN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |:: ::::: | ||| :: ||:|||| |:: ||
91 SLSTSESGSLAVQVSKLVVHEKWNAQKLSNGNDJALVKLASPVALTSKIQTACLPPAGTI 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110 VTSSCNGDSGGPLNCQASNGQWQVHGIVSFGSTLGCNYPRRPSVFTRVSNYIDWINSVIA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   174 -ASSCQGDSGGPLVCQKGN-TWVLIGIVSWG-TKNCNI-QAPAMYTRVSKFSTWINQVMA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                      (BY SIMILARITY).
(BY SIMILARITY).
(BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-25.
MEDLINE=91099520; PubMed=2269366;
Pascual R., Vendrell J., Aviles F.X., Bonicel J., Wicker C.,
Puigserver A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SIMILARITY.
| 125C783B857B71E3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                   CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                             ACTIVATION PEPTIDE. ELASTASE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39.9%; Score 499; DB 1; 43.0%; Pred. No. 1.2e-37;
                                                                                                                                                                                                                                                                                                                                              Hydrolase; Serine protease; Zymogen; Signal.
SIGNAL 1 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY. SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY
                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; I.
PRINTS; PR00722; CHYMOTRPEIN.
SMART; SM0020; Tryp_SPC; I.
PROSITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS00134; TRYPSIN_HIS; I.
PROSITE; PS00135; TRYPSIN_BER; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                 JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY
BY
BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28885 MW;
                          : L00120; AAA98780.1; J
: L00121; AAA98780.1; J
: L00122; AAA98780.1; J
: L00123; AAA98780.1; J
        AAA98780.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214
271 AA;
                                                                                                              PIR; A00961; ELRT2.
HSSP; P00772; 1ELG.
MEROPS; S01.155; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 270 KN 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAC3_BOVIN
P05805;
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                PROPEP
CHAIN
                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAC3_BOVIN
```

g

δ

q

ö

g ò g ò a

ò

8;

```
PRINTS; PR00722; CHYMOTRYPSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EL3B_HUMAN
                                                                                                                                                           ACT_SITE
ACT_SITE
ACT_SITE
CONFLICT
SEQUENCE
                                                                                                           DISULFID
                                                                                                                                    DISULFID
                                                                                                                                              DISULFID
                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                  Local
                                                                        SIGNAL
                                                                                  PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELA3B.
                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EL3B_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
å
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                      Shimada Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: ACTS UPON ELASTIN.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Phe-|-xaa. Hydrolyzes elastin.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: PANCEED.
-!- SIMILARITY: BELONGS TO PEPPIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-87217962; Pubmed-3646943;
Kawashima I., Tani T., Shimoda K., Takiguchi Y.;
Characterization of pancreatic elastase II cDNAs: two elastase II
mRNAs are expressed in human pancreas.";
DNA 6:163-172(1987).
                                                                                                                     Chordata; Craniata; Vertebrata; Euteleostomi;
Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                          TISSUE-Pancreas;
MEDLINE-88198076; PubMed-2834346;
Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N., Shima Ozawa T., Mikayama T., Iljima H., Ishida A., Sato Y., Tamai Y., Tanaka J., Ikenaga H.;
Tanaka J., Ikenaga H.;
"Moleoular cloning and expression in Escherichia coli of a cDNA encoding human 102:1555-1563(1987).
                                                                                                                                                                                                                                                                                  Fletcher T.S., Shen W.F., Largman C.; "Primary structure of human pancreatic elastase 2 determined by sequence analysis of the cloned mRNA."; Biochemistry 26:7256-7261(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases
                             EL2A_HUMAN STANDARD; PRT; 269 AA. P08217; 01443; 001-AUG-1988 (Rel. 08, Created) 01-AUG-1988 (Rel. 08, Last sequence update) 115-JUN-2002 (Rel. 41, Last annotation update) Elastase 2A precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS; S01.155; -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                              SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE-88107669; PubMed-3427074;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AL512883; CAC424211; -: EMBL; BC007031; AAH07031:1; -- PIR; A27432; A27432; PIR; BC6823; B26823.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M16631; AAA52374.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M16652; AAA52380.1; -. D00236; BAA00165.1; -.
                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P00772; 1ELG.
MEROPS; S01.155; -.
                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Pancreas;
                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thomas
                      EL2A_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
          RESULT 12
```

```
58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174 A-SSCQGDSGCPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVWA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                            BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
CHARGE RELAY SYSTEM (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29 VVGGEEARPNSWPWQVSLQYSSNGKWYHTCGGSLIANSWVLTAAHCISSSRTYRVGLGRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Pancreas;
MEDLINE-88087253; PubMed-2826474;
Tani T., Ohsumi J., Mita K., Takiguchi Y.;
"Identification of a novel class of elastase isozyme, human pancreatic elastase III, by cDNA and genomic gene cloning.";
J. Biol. Chem. 263:1231-1239(1988).
                                                                                                                                                                                                                                                                                                                                                                                                            Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           85; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                 A2E05143EFF4987C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase IIIB precursor (EC 3.4.21.70) (Protease E)
                                                                                                                                      ACTIVATION PEPTIDE. ELASTASE 2A.
                                                                                                                                                                                                                                                                                                                                                                                                            Score 486; DB 1;
Pred. No. 1.7e-36;
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
Hydrolase; Serine protease; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              270 AA.
                                                                                                                                                                                                                                                                                                                                              (IN REF
                                                                                                                                                                                                                                                                                                                                                                                                                                                           41; Mismatches
                                                                                                                                                                                                                                                                                                                                              ^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P08861; P11423;
01-NOV-1988 (Rel. 09, Created)
116-CCT-2001 (Rel. 40, Last sequisidated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                    28888 MW;
                                                                                                                                                                                                                                                                                                                                                                                                              38.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                        43.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 4-270 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                             121
216
202
269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R.;
```

MISSING (IN REF. 5).

```
A 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EL2_BOVIN
     CONFLICT
                                         SEQUENCE
                                                                                 Query Match
                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               029461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
EL2_BOVIN
                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                           89
                                                                                                                                                                                                                                                                                                                                                       149
                                                                                                                                                                                                                                                                                                                                                                                                                                 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
       FT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HID DAY REPAYED BY THE DAY OF THE
                                                                                                                                                                                                                                     δy
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                     Сp
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                             Wendorf P., Geyer R., Sziegoleit A., Linder D.; Localization and characterization of the glycosylation site of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- SİMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: EFFICIENT PROTEASE WITH ALANINE SPECIFICITY BUT ONLY LITTLE ELASTOLYTIC ACTIVITY.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Ala-|-Xaa. Does not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
PROBABLE.
MEDLINE-88000545; PubMed-3477287;
Shen W., Fletcher T.S., Largman C.;
"Primary structure of human pancreatic protease E determined by
sequence analysis of the cloned mRNA.";
Biochemistry 26:3447-3452(1987).
                                                                                                                                                     MEDLINE-89325560; PubMed-2753124;
Moulard M., Kerfelec B., Mallet B., Chapus C.;
"Identification of a procarboxypeptidase A-truncated protease Binary complex in human pancreatic juice.";
FEBS Lett. 250:166-170(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- CAUTION: Was originally (Ref.5) thought to be elastase 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protease; Zymogen; Signal; Glycoprotein.
15 OR 16 (POTENTIAL).
28 ACTIVATION PEPTIDE (POTENTIAL).
                                                                                                                                                                                                                                                                           SEQUENCE OF 94-164, AND CARBOHYDRATE-LINKAGE SITES ASN-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. . .).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G (IN REF. 3).
G (IN REF. 3).
R (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /FTIG-CAR_000212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELASTASE IIIB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genew; HGNC:15945; ELA3B.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ^ ^ ^
                                                                                                                                                                                                                                                                                             TISSUE=Pancreas;
MEDLINE-89289996; Pubmed-2737288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIMIS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240, TRYPSIN_DOM; 1.
PROSITE; PS00114; TRYPSIN_HIS; 1.
PROSITE; PS001135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY
BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M16630; AAA36482.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlycoSuiteDB; P08861; -
SWISS-2DPAGE; P08861; HUMAN.
                                                                                                                                                                                                                                                                                                                                                                       pancreatic elastase 1.";
FEBS Lett. 249:275-278(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC005216; AAH05216.1;
M18692; AAA58454.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270
73
123
217
74
74
120
223
204
244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hydrolyse elastin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; B29934; B29934
PIR; A27206; A27206.
PIR; S04999; S04999.
PIR; S04490; S04490.
HSSP; P05805; IFON.
MEROPS; S01.205;
                                                                                                                 SEQUENCE OF 31-50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hydrolase; Serine
                                                                                                                                       TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gestin M., Programment of the property of the program of the pancreatic preproelastases I and II: comparison of nucleotide and antho acid sequences and tissue specific expression.";

Comp. Biochem. Physiol. 118B:181-187(1997).

-i. FUNCTION: ACTS UPON ELASTIN.

-i. CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-|-Xaa. Hydrolyzes elastin.

-i. SUBCELLULAR LOCATION: Secreted.

-i. TISSUE SPECIFICITY: PANCREAS.

-i. SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                  SGASSCQGDSGGPLVC-QKGNTWVLIGIVSW-GTKNCNI-QAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DRSSNAEPVQVLSI--ARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    114 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                          27
                                                                                                                                                                                                                                             1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                         13;
                                                                                                                   38.5%; Score 481.5; DB 1; Length 270; 42.7%; Pred. No. 4.3e-36; Live 39; Mismatches 86; Indels 13
                               164 R -> P (IN REF. 3).
29293 MW; B14BE0AAD3695AFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Pancreas; MEDLINE=98079203; PubMed=9418008;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last seq
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X97635; CAA66231.1; -. HSSP; P00766; 1CHG.
                                                                                                                                                                              Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bovidae; Bovinae; Bos.
129 1
164 1
270 AA;
                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            801.155;
```

```
Local
                                                                                                                                                                                                                                                            PROPEP
CHAIN
                                                                                                                                                                                                                                                  SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116
          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                       58 DRSSNAEPVQVLSIARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                    174 -ASSCOGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                 108 VTSSCNGDSGGPLNCQAANRQWQVHGIVSFGSSLGCNYYRKPSVFTRVSNYNDWISSVIE 267
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Phe-|-xaa. Hydrolyzes elastin.
-- SUBCELULAR LOCATION: Secreted.
--- TISSUE SPECIFCITY: PANCREAS.
--- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
PRINTS; PR00722; CHANGE OF TYP_SPC; 1.

SWART; SW00020; TYP_SPC; 1.

PROSITE; PS00134; TRYPSIN_LER; 1.

PROSITE; PS00135; TRYPSIN_LER; 1.

PROSITE; PS00135; TRYPSIN_LER; 1.

Hydrolase; Serine protease; Zymogen; Signal.

BY SIMILARITY.

ATTIVATION PEPTIDE (BY SIMILARITY).

ATTIVATION PEPTIDE (BY SIMILARITY).

ATTIVATION PEPTIDE (BY SIMILARITY).

ATTIVATION PEPTIDE (BY SIMILARITY).
                                                                                                                SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                     116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCR--QYWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                          Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                elastase II and trypsin genes.";
Nucleic Acids Res. 14:8307-8330(1986).
-!- FUNCTION: ACTS UPON ELASTIN.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. SubMed-3641189; Statement Statement Stevenson B.J., Hagenbucchle O., Wellauer P.K.; Stevenson B.J., Hagenbucchle O., Wellauer P.K.; Sequence organisation and transcriptional regulation of
                                                                                                                                                                                                                      38.3%; Score 480; DB 1; Length 26 42.6%; Pred. No. 5.9e-36; Live 39; Mismatches 88; Indels
                                                                                                              CHARGE RELAY SYSTEM (BY SIM CHARGE RELAY SYSTEM (BY SIM CHARGE RELAY SYSTEM (BY SIM BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271 AA
                                                                                                                                                                                                   3
                                                                                                                                                                                                  28856
                                                                                                                                                                                                                                               Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                          28
269
73
121
216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus (Mouse)
                                                                                                                         121
216
58
155
186
212
269 AA;
                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EL2_MOUSE
P05208;
                                                                                                               ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                         DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
EL2_MOUSE
        g
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
```

```
use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DRSSNAEPVQVLSIARAITHPNWNANTMNN--DLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174 -ASSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCNI-QAPAMYTRVSKFSTWINQVMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 475; DB 1; Length 271;
Pred. No. 1.7e-35;
9; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FA542AE38FED3B4B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                    (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                   CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                    ACTIVATION PEPTIDE
                                                                                                                                                                                                                                                                                                                                                 Serine protease; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40.5%; Pred. No. 1.7e
tive 39; Mismatches
                                                                                             EMBL, X04573; CAA28242.1; --
EMBL, X04576; CAA28244.1; --
HSP, P00772; LELG.
HSRP, P00772; LELG.
MEROPS; S01.155; --
MGD, MG1.95316; Enla2.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_Protease_Try.
Pfam; PR00702; CHYMOTRYPSIN.
SMART; SM00020; Trypsin; 1.
PROSITE; PS00722; CHYMOTRYPSIN.
SMART; SM00134; TRYPSIN. DOM; 1.
PROSITE; PS00134; TRYPSIN. HSP.
Hydrolase; Serine protease; Zymogen; Signi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        December 20, 2002, 15:17:15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28913 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                  30
271
75
123
218
76
224
204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           271 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: Decembor Job time: 8.91304 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
157
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RN 271
                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
```

and the second of the second o

```
December 20, 2002, 15:14:28; Search time 14.6087 Seconds (without alignments) 1520.126 Million cell updates/sec
                                                                                                                                                                                                                                      1252
1 IVNGENAVPGSWPWQVSLQD......AMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                               283224
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                    283224 seqs, 96134422 residues
                                                                                                                                                                                                               US-09-856-319B-4_COPY_34_264
                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                               Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                            Run on:
```

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database: PIR_73:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

and is derived by analysis of the total score distribution.

ES	Description	chymotrypsin-like	Ξ	_					chymotrypsin B - A	pancreatic elastas	pancreatic elastas	polyprotein - Afri	pancreatic elastas	procarboxypeptidas	pancreatic elastas	pancreatic elastas	(EC 3	plasmin (EC 3.4.21	pancreatic elastas	ī	ည္ (E)	Ξ	(EC 3	tic ela		pancreatic elastas	pancreatic elastas	tryptase (EC 3.4.2	trypsin (EC 3.4.21	n-1
SUMMARIES		9	2	7	6				σ	9		7	e	3	4	<b>&amp;</b>			4	0	2	æ		e	4	9	5	9	œ	<u>.</u> ص
SU	QI :	13813	A21195	S47537	A31299	KYBOB	KYBOA	KYRTB	872219	A26823	ELRT2	T30337	B2682	CPB0A3	B2993	A25528	PLHU	PLMS	A29934	S5616	B6154	B30848	PLPG	C26823	A57014	568826	S68825	A4724	TRPGTR	A2347
	60	~	7	7	~	-	-	-	~	7												7	7	7	7	7	7	7	7	7
	Query Match Length	264	263	263	. 263	245	245	263	244	269	271	1524	269	240	270	271	810	812	270	270	460	810	790	269	343	268	268	273	231	126
đ	Query Match	89.4	60.5		59.9			57.1												36.4	36.1	36.1	35.9	35.9	35.8		35.7			35.2
	Score	1119	5	20	20	5	5	715.5	7	503	499	487	486	8	481.5	475	464.5	462	460.5	455.5	452.5	451.5	449.5	449	448.5	447.5	47.	٠	444	441
	Result No.	1	7	m	4	S	9	7	80	6	10	11	12	13	14	15	16	17	.18	19	20	21	22	23	24	25	56	27	28	29

RESULT 2
A21195
chymotrypsin (EC 3.4.21.1) 2 precursor - dog
chymotrypsin (EC 3.4.21.1) 2 precursor - dog
C.Species: Canis lupus familiaris (dog)
C.Species: 27-uul-1990 #sequence_revision 27-Jul-1990 #text_change 22-Jun-1999
C.Accession: A21195

9 9 g 8

30 4340 35.1 246 1 TRRT1	tryptan (EC 3.4.21 tryptase (EC 3.4.2 plasmin (EC 3.4.21 trypsin (EC 3.4.21 trypsin (EC 3.4.21 trypsin (EC 3.4.21 trypsin (EC 3.4.21 pancreatic elastas mast cell proteina trypsin (EC 3.4.21 pancreatic elastas mast cell proteina trypsin (EC 3.4.21 pancreatic (EC 3.4.21 plasmin (EC 3.4.21 plasmin (EC 3.4.21 pancreatic elastas probable pancreati	human *text_chan A.B.; Pryd nes on chr 8911 CAA50710.1	DB 2; Length 264; ie-90; i 10; Indels 0; Gaps 0; vTAAHCQVTPGRHFVVLGEYDRS 60                           vTAAHCNVSPGRHFVVLGEYDRS 93	SNAEPVOVLSIARAITHPNWNANTWNNDLTLKKLASPARŸTAQVSPVCLASTNEALPSGL 120       :    ::      :
440 35.1 9.5 35.1 436 34.8 436 34.8 437 34.8 432 34.8 432 34.6 6.5 34.4 6.5 34.4 6.5 34.1 7.5 34.1 7.7 34.1 7.8 34	1001111011011001	ALIGNMENTS  (EC 3.4.21) CTR  revision 06-Sep- istensen, T.; Kol i, 1993 iv unrelated hum UID:94093544; PMI ated from GB/EMBL 74; NID:9406226; 11 11 11 11 11 11 11 11 11 11 11 11 11	89.4%; Score 1119; DI 86.1%; Pred. No. 6.2e tive 22; Mismatches VSLQDNTGFHFCGGSLISPNWVVV      :	THPNWNANTMNDLTLLKLASP/    :  :  :   THPSWNSTTMNNDVTLLKLASP/
30 31 32 33 33 34 35 36 37 40 41 42 43 43 44 42 43 44 42 44 42 44 42 44 42 44 42 44 42 43 44 42 43 44 42 43 44 42 43 44 42 43 43 44 42 43 43 44 42 43 43 43 44 44 42 43 43 43 44 44 42 43 43 44 42 43 43 43 43 44 44 42 43 43 43 44 44 43 43 44 44 43 43	43 440 35.1 439.5 335.1 436 34.9 436 34.8 436 34.8 433 34.8 430.5 34.4 430.5 34.4 428 34.3 428 34.2 428 34.2 428 34.2 428 34.2 428 34.2	RESULT 1 138136 chymotrypsin-like proteinase C;Species: Homo sapiens (man) C;Date: 06.58p-1996 #sequence C;Accession: 138136 R;Larsen, F.; Solheim, J; Kr Hum. Mol. Genet. 2, 1589-1595 A;Title: A tight cluster of f A;Reference number: 138135; M A;Catus: preliminary; transl A;Molecule type: DNA A;Status: preliminary; transl A;Molecule type: DNA A;Status: preliminary; transl A;Cross-references: EMBL:X718 C;Genetics: C;Genetics: 1264 cRES> A;Genetics: 1264 cRES> A;Genetics: 1264 cRES> C;Genetics: 1264 cRES> A;Gross-references: EMBL:X718 A;Gross-references: GDB:20406 A;Map position: 16q22.1-16q22 A;Introns: 1841; 52/3; 79/2; C;Superfamily: trypsin; tryps C;Reywords: hydrolase; serine F;75,121,214/Active site: His	Ma Locales 1 1	

```
Accession: A31299
                       213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
R;Pinsky, S.D.; LaForge, K.S.; Luc, V.; Scheele, G.
Proc. Natl. Acad. Sci. U.S.A. 80, 7486-7490, 1983
A;Title: Identification of cDNA clones encoding secretory isoenzyme forms: sequence dete A;Reference number: A21195; MUID:84170253; PMID:6584866
A;Accession: A21195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                      ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chymotrypsin (EC 3.4.21.1) precursor - Atlantic cod
C; Species: Gadus morhua (Atlantic cod)
C;Date: 26-Dec-1994 #sequence_revision 03-Aug-1995 #text_change 22-Jun-1999
C;Accession: S47537; S43163
R;Gudmundsdottir, A.; Oskarsson, S.; Eakin, A.E.; Craik, C.S.; Bjarnason, J.B.
B;Ochim. Biophys. Acta 1219, 211-214, 1994
A;Title: Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.
A;Reference number: S47537; MUID:94368860; PMID:8086467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-263 <GUD>
A; Cross-references: EMBL:X78490; NID:g468750; PIDN:CAA55242.1; PID:g468751
C; Superfamily: trypsin; trypsin homology
C; Keywords: hydrolase; protein digestion; serine proteinase
F; 1-18/Domain: signal sequence #status predicted <SIG>
F; 19-263/Product: chymotrypsin #status predicted <MAT>
F; 34-256/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93 SNSEGVQVMTVGQVFKHPRYNGFTINNDILLVKLATPATLNMRVSPVCLAETDDVFEGGM 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153 LCVTTGWGLTKHTNANTPDKLQQAALPLLSNAECKKFWGSKITDLMVCAGASGVSSCWGD 212
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                    PID:9163946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 263;
                                                                                                                                                                                                                                                                                                                    60.5%; Score 757.5; DB 2; Length 263; 58.0%; Pred. No. 1.7e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                       A; Molecule type: mRNÅ
A; Residues: 1-263 <PIN>
A; Cross-references: GB:K0173; NID:g163945; PIDN:AAA30841.1;
C; Superfamily: trypsin; trypsin homology
C; Keywords: hydrolase; protein digestion; serine proteinase
F; 34-256/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                        F;34-256/Domain: trypsin nowology with status predicted F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59.9%; Score 750.5; DB 2;
llarity 58.4%; Pred. No. 6.9e-58;
Conservative 33; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                      35; Mismatches
                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 58.0
Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     å
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
C; Accession: A00953
R;Smillie, L.B.; Furka, A.; Nagabhushan, N.; Stevenson, K.J.; Parkes, C.O.
R;Smillie, L.B.; Furka, A.; Nagabhushan, N.; Stevenson, K.J.; Parkes, C.O.
Nature 218, 343-346, 1968
A;Title: Structure of cfymotrypsinogen B compared with chymotrypsinogen A and trypsin A;Title: Structure of cfymotrypsinogen B compared with chymotrypsinogen A and trypsin A; Reference number: A00953; MUD:68238908; PMID:5649671
A;Reference number: A00953; MUD:68238908; PMID:5649671
A;Residues: 1-245 <SMI>
C;Comment: Chymotrypsinogen B is synthesized, along with chymotrypsinogen A, in the a C;Comment: The first activation cleavage, leading to pi-chymotrypsin B, occurs in the C;Comment: The first activation cleavage, leading to pi-chymotrypsin B, occurs in the C;Comment: The first activation cleavage, leading to pi-chymotrypsin B; 115,700main: propeptide #status experimental <RNO>
F;1-15/Domain: propeptide #status experimental <ANAT>
F;1-238/Pomain: trypsin homology <ATRILIA: A2-288 Loberimental
F;1-122, 42-58 J36-201,168-182,191-220/Disulfide bonds: #status experimental
F;57,102,195/Active site: His, Asp, Ser #status experimental
                                                                                                                                                                                                                                                                                                                                                            R:Tomita, N.; Izumoto, Y.; Horii, A.; Doi, S.; Yokouchi, H.; Ogawa, M.; Mori, T.; Mat Biochem. Biophys. Res. Commun. 158, 569-575, 1989
A;Title: Molecular cloning and nucleotide sequence of human pancreatic prechymotryps1
A;Reference number: A31299; MUID:89134264; PMID:2917002
A;Accession: A31299
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-263 <TOM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N;Alternate names: chymotrypsinogen B
C;Species: Bos primigenius taurus (cattle)
C;Date: 08-Oct-1981 #sequence_revision 08-Oct-1981 #text_change 18-Jul-1997
                                                                                                                                                                                                                                                                           C;Species: Homo sapiens (man)
C;Date: 08-Jun-1989 #sequence_revision 08-Jun-1989 #text_change 22-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references: GB: M24400; NID: 9181189; PIDN: AAA52128.1; PID: 9181190
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C.Keywords: hydrolase; protein digestion; serine proteinase F;34-256/Domain: trypsin homology <TRY>F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 59.9%; Score 750.5; DB 2; Best Local Similarity 58.0%; Pred. No. 6.9e-58; Matches 134; Conservative 35; Mismatches 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chymotrypsin (EC 3.4.21.1) B precursor - bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OMIM:118890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GDB:119820; OMIM:1188
A;Map position: 16q23.1-16q23.1
C;Superfamily: trypsin; trypsin homology
                                                                                                                                                                                                                                        chymotrypsin (EC 3.4.21.1) precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Gene: GDB:CTRB1; CTRB
```

```
F;16-238/Domain: trypsin homology <TRY>
F;1-122,42-58,136-201,168-182,191-220/Disulfide bonds: #status
F;57,102,195/Active site: His, Asp, Ser #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 55.49
Matches 128; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
S72219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Comment: Chymotrypsinogens are synthesized in the acinar cells of pancreas.
C;Comment: Tryptic cleavage after Arg-15 results in a fully active enzyme (pi-chymotrypt delacety) and the comment. Tryptic cleavage after Arg-15 results in a fully active enzyme (pi-chymotrypt delacety) further chymotryptic cleavage liberates the dipeptide Thr-147 and Ag Asn-148 directly from chymotrypsinogen, which leads to the degraded form neochymotryps (S;Superfamily: trypsin: trypsin homology C;Superfamily: trypsin: trypsin homology C;Keyvords: hydrolase; pancreas; protein digestion; serine proteinase; zymogen F;1-245/Product: chymotrypsinogen #status experimental carm>F;1-13,16-146,149-245/Product: alpha-chymotrypsin #status experimental cMPT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chymotrypsin (EC 3.4.21.1) A precursor - bovine
N:Alternate names: chymotrypsinogen A
C:Species: Bos primigenius taurus (cattle)
C:Species: Bos primigenius taurus (cattle)
C:Accession: A90235; A93158; S29550; A00952
R:Brown, J.R.; Hartley, B.S.
Biochem, J. 101, 214-228, 1966
A:Title: Location of disulphide bridges by diagonal paper electrophoresis. The disulphid A:Reference number: A90235; MUID:67181721; PMID:5971783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Wolecule type: protein
R; Residues: 1-101, N', 103-245 < BRO>
R; Residues: 1-101, N', 103-245 < BRO>
R; Residues: 1-101, N', 103-245 < BRO>
R; Blow, D.M.; Birktoft, J.J.; Hartley, B.S.
Nature 221, 337-340, 1969
A; Title: Role of a buried acid group in the mechanism of action of chymotrypsin.
A; Reference number: A33168; MUID: 69106266; PMID: 5764436
A; R; Meloun, B.; Kluh, I.; Kostka, V.; Moravek, L.; Prusik, Z.; Vanacek, J.; Keil, B.; Sorm Biochim. Biophys. Acta 130, 543-546, 1966
A; Title: Covalent structure of bovine chymotrypsinogen A.
A; Reference number: A90572; MUID: 67183948; PMID: 5972866
A; Accession: A93158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein
A; Residues: 1-101, N', 103-245 < MEL>
A; Residues: 1-101, N', 103-245 < MEL>
A; Residues: 1-101, N', 103-245 < MEL>
A; Note: disulfide bonds were determined
A; Note: disulfide bonds were determined
B; Curruzzola, F.; Ascenzi, P.; Barra, D.; Bolognesi, M.; Menegatti, E.; Sarti, P.; Schne
Biochim. Biophys. Acta 1161, 201-208, 1993
A; Title: Selective oxidation of Met-192 in bovine alpha-chymotrypsin. Effect on catalyti
A; Reference number: S29650; MUID:93160238; PMID:8431470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Wolecule type: protein
A; Residues: 1-12:16-27;149-160;181-200 <CUT>
A; Residues: 1-10:16-27;149-160;181-200 <CUT>
R; Smillid: L.B.; Hartley, B.S.
Biochem. J. 101, 232-241, 1966
A; Title: Histidine sequences in the active centres of some 'serine' proteinases. A; Reference number: A90236; MUD: 67181723; PMID: 5971785
A; Contents: annotation; active site
R; Birktoft, J.J.; Blow, D.M.; Henderson, R.; Steitz, T.A.
Philos. Trans. R. Soc. Lond. B257, 67-76, 1970
A; Title: The structure of alpha-chymotrypsin.
                                                                   ï
                                                                                                                                                                                                                                                  61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                     TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                          1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                       16 IVINGEDAVPGSWPWQVSLQDSTGFHFCGGSLISEDWVVTAAHCGVTTS-DVVVAGEFDQG 74
                                                                   ij
      Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                Indels
DB 1;
                                Pred. No. 4.7e-57
                                                          32; Mismatches
   59.1%; Score 740.5; 57.1%; Pred. No. 4.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Contents: annotation; X-ray crystallography
                                Best Local Similarity 57.19
Matches 132, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A93754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                          à
                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
C.S.; Rutter, W.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ï
                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chymotrypsin (EC 3.4.21.1) B precursor - rat
N;Alternate names: chymotrypsinogen B
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Dec-1987 #sequence_revision 28-Dec-1987 #text_change 18-Jun-1999
C;Accession: A22658
R;Bell, G.I.; Quinto, C.; Quinoga, M.; Valenzuela, P.; Craik, C.S.; Rutter, A;Title: Isolation and sequence of a rat chymotrypsin B gene.
A;Reference number: A22658; MUID:85054881; PMID:6209274
A;Molecule type: DNA
A;Residues: 1-263 <BEL>
experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212
                                                                                                                                                                                                                                                                                                                         61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                        121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:K02298; NID:g203653; PIDN:AAA98732.1; PID:g203654
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              153 VCATTGWGKTKYNALKTPEKLQQAALPIVSEADCKKSWGSKITDVWTCAGASGVSSCMGD
                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                         1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteinase
                                                                                      245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Superfamily: 18/1; 52/3; .79/2; 105/3; 166/1; 210/3
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; pancreas; protein digestion; serine is:1-18/Pomain: signal sequence #status predicted <SIG>F;1-18/Pomain: stanal sequence #status predicted <SIG>F;19-33/Pomain: propeptide #status predicted <PRO>F;34-263/Product: chymotrypsin B #status predicted <MAT>F;34-256/Pomain: trypsin homology <TRY>F;34-256/Pomain: trypsin homology <TRY>F;75,120,213/Active site: His, Asp, Ser #status predicted
                                                                                                                                                , 19
                                                                                      DB 1;
                                                                               Ouery Match 58.1%; Score 727.5; DB 1
Best Local Similarity 56.7%; Pred. No. 6.4e-56;
Matches 131; Conservative 32; Mismatches 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 6e-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57.1%; Score 715.5; 55.4%; Pred. No. 7.6
```

W.; Ru

```
C;Accession: A00961
R;MacDonald, R.J.; Swift, G.H.; Quinto, C.; Swain, W.; Pictet, R.L.; Nikovits, W.; Ru Biochemistry 21, 1453-1463, 1982
A;Title: Primary structure of two distinct rat pancreatic preproelastases determined A;Reference number: A00960; MUID:82182967; PMID:6918221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A.Wolecule type: mRNA
A.Residues: 1-271 <MAC>
A.Cross-references: GB:L00124; GB:J00731; NID:g204019; PIDN:AAA98780.1; PID:g204021
C.Superfamily: trypsin; trypsin; homology
C.Superfamily: trypsin; trypsin; serine proteinase; zymogen
F:1-16/Domain: admai sequence #status predicted <SIG>
F:17-30/Domain: activation peptide #status predicted <APT>
F:31-271/Product: elastase II #status predicted <MPT>
F:31-274/Domain: trypsin homology <TRY>
F:31-264/Domain: trypsin homology <TRY>
F:75,123,218/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Residues: 1:1524 < YAN>
A; Cross-references: EMBL:U81290; NID:92981640; PID:92981641; PIDN:AAC24717.1
                                                                                                                                                                                                                                                                                                                                                                                                                                               Species: Rattus norvegicus (Norway rat)
Date: 18-Aug-1982 #sequence_revision 18-Aug-1982 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polyprotein - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_change 22-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174 - ASSCOGDSGGPLVCQKGN-TWVLIGIVSWG-TKNCNI-QAPAMYTRVSKFSTWINQVWA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          210 VTSSCNGDSGGPLNCQASNGQWQVHGIVSFGSTLGCNYPRKPSVFTRVSNYIDMINSVIA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: T30337
K; Yang, J.C.; Lindsay, L.L.; Hedrick, J.L.
submitted to the EMBL Data Library, March 1998
A; Description: CDNA cloning of ovochymase, a chymotrypsin-like protease
A; Reference number: 220829
                                                                                                           208 IISSCNGDSGGPLNCQGANGQWQVHGIVSFGSSLGCNYYHKPSVFTRVSNYIDWINSVIA
         149 LPNNYVCYVTGWGRLQTNG-ASPDILQQGQLLVVDYATCSKPGWWGSTVKTNMICAGGDG
                                                                       -ASSCQGDSGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 499; DB 1; Length 271; Pred. No. 5.3e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89;
                                                                                                                                                                                                                                                                                                                                                                                                                  pancreatic elastase II (EC 3.4.21.71) precursor - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: T30337
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39.9%; Score 43.0%; Pred. No. 5.3e-J. 43.0%; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 39.9%
Best Local Similarity 43.0%
Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A00963
                                                                                                                                                                                                                                                      NN 269
                                                                                                                                                                                               230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KN 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         151
                                                                    174
                                                                                                                                                                                                                                                         268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            270
                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                           В
                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pp
                                                                    ò
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           parceatic elastase II (EC 3.4.21.71) precursor - pig
N;Alternate names: pancreatopeptidase E
C;Species: sus scrofa domestica (domestic pig)
C;Date: 16-Aug.1988 #sequence_revision 16-Aug-1988 #text_change 22-Jun-1999
C;Accession: A26823
R;Kawashima, I:, Tani, T.; Shimoda, K.; Takiguchi, Y.
DNA 6, 163-172, 1987
A;Title: Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are exp
A;Reference number: A90958; MUD:87217962; PMID:3646943
A;Molecule type: mRNA
A;Residues: 1-269 «KAW>
A;Cross-references: GB:M16651; NID:G164441; PIDN:AAA31027.1; PID:g164442
C;Superfamily: trypsin; trypsin homology
C;Keywords: hydrolase; serline proteinase
F;11-6/Domain: propeptide #status predicted <PRO>
F;27-269/Product: elastase II #status predicted <MT>
F;29-269/Product: elastase II #status predicted <MT>
F;29-262/Domain: trypsin homology <PRN>
F;29-262/Domain: trypsin homology
                                                                                                                                    Д
.
                                                                                                                                    M.; Hojrup,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                               Gadus morhua
chymotrypsin B - Atlantic cod (fragments)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 19-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 07-Aug-1998
C;Accession: S72219
R;Leth-Larsen, R.; Asgeirsson, B.; Thorolfsson, M.; Norregaard-Madsen, M.; H Biochim. Blophys. Acta 1297, 49-56, 1996
A;Title: Structure of chymotrypsin variant B from Atlantic cod, Gadus morhua A;Reference number: S72219; MUID:96439045; PMID:8841380
A;Accession: S72219
A;Accession: S72219
A;Accession: Liyils-244 <LET>
C;Superfamily: trypsin, trypsin, homology CfRY>
F:15-237/Domain: trypsin homology <TRY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQYWGAR-ITDAMICAGGSGASSC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 IVNGEEAVPHSWPWQVSLQQSNGFHFCGGSLINENWVVTAAHCNVRT-YHRVIVGEHDKA 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
<u>::</u>
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.1%; Score 714.5; DB 2; 55.1%; Pred. No. 8.6e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40.2%; Score 503; DB 2; 44.2%; Pred. No. 2.4e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <del>--</del>
--
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 55.19
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
A26823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
```

8

Gaps

12;

released from

Fri Dec 20

8

Gaps

12;

```
C. Accession: A25065
R;Venot, N.; Sciaky, M.; Puigserver, A.; Desnuelle, P.; Laurent, G.
Eur. J. Biochem. 157, 91-99, 1986
Eur. J. Biochem. 157, 91-99, 1986
A;Title: Amino acid sequence and disulfide bridges of subunit III, a defective endope A;Reference number: A25065; MUD:86220198; PMID:3519215
A;Accession: A25065; MUD:86220198; PMID:3519215
A;Accession: Protein
A;Residues: 1.240 cvEn>
C;Comment: This protein is found in the pancreatic juice of ruminants, where it const c;Comment: This protein is found in the pancreatic juice of ruminants, where it const c;Comment: This protein is found in the acidic environment of the ruminant duodenum. C;Superfamily: trypsin homology cTRY>
C;Reywords: pancreas
F;1-233/Domain: trypsin homology cTRY>
F;28-44,87-90,127-193,158-174,183-214/Disulfide bonds: #status experimental
F;43,93,187/Active site: His, Asp, Ser #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            procarboxypeptidase A complex component III - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 18-Jul-1997
                                                                                                                                                                                                                                         58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208 VISSCNGDSGGPLNCQASDGRWQVHGIVSFGSRLGCNYYHKPSVFTRVSNYIDMINSVIA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S--SNAEPVQVLSIARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 NGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDR 59
                                                                                                                                                                                                                                                                                180 RSGCNGDSGGPLNCPAADGSWQVHGVTSFVSAFGCNTIKKPTVFTRVSAFIDWIDETIAS
                                                                                                                                                   174 A-SSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                 116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 ASSCQGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINQVMAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 485.5; DB 1;
Pred. No. 6.9e-35;
   7.1e-35;
ches 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 7.1e
                                       41;
43.0%;
                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
   Best Local Similarity
Matches 104; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                        g
                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pancreatic elastase II (EC 3.4.21.71) A precursor - human C; Species: Homo saptens (man)
C; Species: Homo saptens (man)
C; Species: Homo saptens (man)
C; Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 20-Jun-2000
C; Accession: B26823; A27432; A41431; S34491
R; Kawashina, I.; Tani, T.; Shimoda, K.; Takiguchi, Y.
DNA 6, 163-172, 1987
A; Title: Characterization of pancreatic elastase II CDNAs: two elastase II mRNAs are exp.
A; Title: Characterization of pancreatic elastase II CDNAs: two elastase II mRNAs are exp.
A; Reference number: A90958; MUD:87217962; PMID:3646943
A; Residues: 1.269 «KAMA
A; Residues: 1.269 «KELE>
A; Molecule type: mRNA
A; Recession: A27432
A; Molecule type: mRNA
A; Reference number: A27432; MUD:8819076; PMID:3834346
A; Cross-references: GB:M16631; NID:98198076; PMID:2834346
A; Reference number: A41431; MUID:88198076; PMID:2834346
A; Molecule type: mRNA
A; Reference number: A41431; MUID:88198076; PMID:2834346
A; Molecule type: mRNA
A; Reference number: A41431; MUID:88198076; PMID:2834346
A; Molecule type: mRNA
A; Reference number: A41431; MUID:88198076; PMID:2834346
A; Molecule type: mRNA
A; Reference number: A41431; MUID:88198076; PMID:2834346
A; Molecule type: mRNA
A; Reference number: A41431; MUID:88198076; PMID:2834346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA
A Molecule type: mRNA

                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                     1295 VVGGQQAAPRSWPWLVSIQNSKKRHYCGGIIITNKWILTAAHCEVKINLHRVVVGHTDLT 1354
                                                                                                                                                                                                                                                                                                          --SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPS 118
                                                                                                                                                                                                                                                                                                                                                                                                                                               GLT------CVTTGWGRISGVGNVT-PARLQQVVLPLVTVNQCRQYWGARITDAMICAG 170
                                                                                                                                                                     1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           171 GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 228
                                   Length 1524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                73,121,216/Active site: His, Asp, Ser #status predicted
                                ; Score 487; DB 2;
; Pred. No. 4.2e-34;
49; Mismatches 75,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38.8%; Score 486;
                            38.9%;
39.5%;
                                                                                                    Conservative
                                                                    Similarity
                                                                                             94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

æ

Gaps

13;

```
C. Species: Mus musculus (house mouse)
C. Jotte: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 22-Jun-1999
C. Accession: A25528
R. Stevenson, B.J.; Hagenbuechle, O.; Wellauer, P.K.
Nucleic Acids Res. 14, 8307-8330, 1986
A. Accession: A2554
A. Accession: A2554
A. Accession: A2554
A. Molecule type: MRNA
A. Reference number: A93646; MUID:87066713; PMID:3641189
A. Accession: A2554
A. Molecule type: MRNA
A. Residues: 1-271 <STE>
C. Superfemences: GB:X04573; NID:950825; PIDN:CAA28242.1; PID:950826
C. Superfemences: GB:X04573; NID:950825
C. Superfemences: GB:X04573; NID:950825
C. Superfemences: GB:X04573; NID:950826
C. Superfemences: GB:X04573; NID:950826
C. Superfementer it rypsin proteinase
F; 1-30/Domain: signal sequence #status predicted <MAT>
F; 31-271/Product: pancreatic elastase II #status predicted
F; 31-264/Domain: trypsin homology <TRY>
F; 31-234/Domain: trypsin homology <TRY>
F; 31-234/Domain: trypsin homology <TRY>
F; 31-231/218/Active site: His, Asp, Ser #status predicted
                        DRSSNAEPVQVLSI--ARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                       172 SGASSCQGDSGGPLVC-QKGNTWVLIGIVSW-GTKNCNI-QAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                        208 DIRSGCNGDSGGPLNCPTEDGGWQVHGVTSFVSAFGCNTRRKPTVFTRVSAFIDWIEETI 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGENAVPGSWPWQVSLQ---DNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DRAVKEGPEQVIPINSGDLFVHPLWNRSCVACGNDIALIKLSRSAQLGDAVQLASLPPAG
                                                                                                                                                                                                                  EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match 37.9%; Score 475; DB 2; L
Local Similarity 40.5%; Pred. No. 6.5e-34;
les 98; Conservative 39; Mismatches 93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RN 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229 A 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Si
Matches 98;
                                                                                                                          89
                                                                                                                                                                                                                       114
                                                                                                                                                                                                                                                                                                               149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116
                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                q
                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: A94507
A; Reference number: A94507
A; Contents: revision to residue 119
A; Accession: A27206
A; Molecule type: DNA
A; Residues: (G', 5-63, (G', 65-78, 'W', 80-163, 'P', 165-270 <FLE>
A; Residues: (G', 5-63, (G', 65-78, 'W', 80-163, 'P', 165-270 <FLE>
B; A; Residues: (G', 5-63, (G', 65-78, 'W', 80-163, 'P', 165-270 <FLE>
B; A; Atlass. F.X.; Pascual, R.; Salva, M.; Bonicel, J.; Putgserver, A.
Biochem. Biophys: Res: Commun. 163, 1191-1196, 1989
Biochem. Biophys: Res: Commun. 163, 1191-1196, 1989
A; Title: Generation of a subunit III-11ke protein by autolysis of human and porcine prof. A; Reference number: A33257; MUID:89392022; PMID:2675835
pancreatic elastase (EC 3.4.21.36) IIIB precursor - human
N.Alternate names: 35K glycoprotein; pancreatic protein P35; protein G32; proteinase E
C;Species: Homo sapiens (man)
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 22-Jun-1999
C;Accession: B29934, A90516; A27206; A33257; A28932; S04999; S04490
C;Accession: Lohmul, J.; Mita, K.; Takiguchi, Y.
J. Biol. Chem. 263, 1231-1239, 1988
A;Title: Identification of a novel class of elastase isozyme, human pancreatic elastase A;Reference number: A92664; MUID:88087253; PMID:2826474
A;Residues: 1-270 <TANA
A;Residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein
A; Residues: 31-50 <MOU>
R; Wendorf, P.: Geyer, R.: Sziegoleit, A.; Linder, D.
RESE Lett. 249, 275-278, 1989
A; Title: localization and characterization of the glycosylation site of human pancreatic
A; Reference number: S04490; MUID:89289996; PMID:2737288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rishen, W.; Fletcher, T.S.; Largman, C.
Blochemistry 26, 3447-3452, 1987
A;Title: Primary structure of human pancreatic protease E determined by sequence analysi
A;Reference number: A90516; MUID:88000545; PMID:3477287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 18-57 <AVI>
R; Guy-Crotte, O.; Barthe, C.; Basso, D.; Fournet, B.; Figarella, C.
Biochem. Biophys. Res. Commun. 156, 138-322, 1988
A; Title: Characterization of two glycoproteins of human pancreatic juice: P35, a truncat
A; Reference number: A28932; MUID: 89025862; PMID: 3178837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Wolecule type: protein
A; Roaldues: 'X', 73-55,'XX,'X', 54-55,'XXX', 59-63 <CUY>
A; Readues: 'X', 73-52,'X', 54-55,'XXX', 59-63 <CUY>
R; Woulard, M.; Kerfelec, B.; Mallet, B.; Chapus, C.
FEBS Lett. 250, 166-170, 1989
A; Title: Identification of a procarboxypeptidase A-truncated protease E binary complex
A; ArEference number: S04999; WUID:89325560; PMID:2753124
A; Accession: S04999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Residues: 94-128;132-164 < WEN>
A; Residues: 94-128;132-164 < WEN>
A; Residues: 94-128;132-164 < WEN>
C; Superfamily: trypsin, trypsin homology
C; Superfamily: trypsin; trypsin hydrolase; serine proteinase; zymogen
C; Superfamily: algoriter and sequence #status predicted <SIGNORMIN: activation peptide #status predicted <ACT>
F; 29-270/Product: (or 31-270) pancreatic elastase IIIB #status predicted
F; 29-263/Domain: trypsin homology <TRY>
F; 29-270/Arctive site: His, Asp, Ser #status predicted
F; 114/Rinding site: carbohydrate (Asn) (covalent) #status experimental
F; 153/Binding site: carbohydrate (Asn) (covalent) #status absent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Cross-references: GB:M18692; NID:g607029; PIDN:AAA58454.1; PID:g182035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 'G',5-63,'G',65-78,'W',80-118,'G',120-163,'P',165-270 <SHE>
R; Fletcher, T.S.
submitted to GenBank, August 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.5%; Score 481.5; DB 2; Length 270; Similarity 42.7%; Pred. No. 1.8e-34; Conservative 39; Mismatches 86; Indels 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A90516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
```

the mouse elastase I

8;

Indels 12; Gaps

Length 271;

```
210 VISSCNGDSGGPLNCRASNGQWOVHGIVSFGSSLGCNYPRKPSVFTRVSNYIDWINSVMA 269
DRSSNAEPVQVLSIARAITHPNWNANTMNN--DLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                     174 -ASSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCNI-QAPAMYTRVSKFSTWINQVWA
                                                                                                                 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: December 20, 2002, 15:19:50 Job time : 15.6087 secs
```

IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57 :1||||:||| ||||||| : :||||||||| vvngeDavpyswpwQVSLQYEKSGSFYHTCGGSLIAPDWVVTAGHCISSSRTYQVVLGEY 88

```
481.5
  11
                                                                                                                                December 20, 2002, 15:12:13 ; Search time 35.6087 Seconds (without alignments) 864.421 Million cell updates/sec
                                                                                                                                                                                                               US-09-856-319B-4_COPY_34_264
1252
1 IVNGENAVPGSWPWQVSLQD..........AMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                 908470
                    GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                        908470 segs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A_Geneseq_101002:
                                                                                                                                                                                                                 Title: Perfect score: Sequence:
                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                    Run on:
```

/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1981.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1981.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1984.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1985.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1985.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1985.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1985.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1987.DAT:*
/SIDS2/gcgdata/geneseqg-emb1/AA1987.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Description	Mouse serine prote	Human serine prote	Human pancreatic c	Amino acid sequenc	Human chymotrypsin	Bovine chymotrypsi	Porcine elastase I	Pig pancreas elast	Porcine pancreatic	Sequence of human
SUMMARIES		a	AAB11711	AAB11710	AAB54077	AAU82738	AAB98504	AAY99596	AAP61724	AAP70758	AAR29621	AAP60062
		DB	21.	21	21	23	22	21	7	œ	13	7
		Query re Match Length DB 1	264	264	192	263	231	245	269	269	253	269
	æ	Query Match	100.0	88.8	60.4	60.3	59.9	58.1	40.2	40.2	40.0	38.8
		Score	1252	1112	756	755.5	750.5	727.5	503	503	500.5	486
		Result No.		7	e	4	5	9	7	æ	6	10

	11	481	38.5	242	<u>ر</u>	AAP60061		Sequence of human
	13	4	37.6	279	~	ABG20513		human
	15	465	37.5 37.2	269 791	æ	AAP61723 AAW34285		Human elastase II. Human plasminoqen.
	16	465	37.2	810	mm	ABB83470		Human plasminogen.
	800	465	37.2	1220	20	AAU32858		Novel human secret
	20	464	37.1	249	m	ABB81497		Human microplasmin
	22	464.5	37.1 37.1	348 437	13	ABB81498 AAW51457		Human miniplasmino Human plasminogen
	23	464	37.1	546	4 4	AAR34427		Sequence of tissue
	25	464	37.1	790	10 0	AAB36562		Mammalian kringle
	26	464	37.1 37.1	791	-	AAB01887 AAY99589		Human plasminogen,
	58	464	37.1	791	4 ~	AAY 50867		Human plasminogen
	30	464	37.1 37.1	791	n m	AAE23660		Amino acid sequenc Human plasminogen
	31	464	37.1	810	· ~~ (	AAR08065		Human plasminogen
	3 6	404	37.1	810	7 (1	AAR12406		R561E human plasmi
	34	464	37.1	810	2	AAR13220		R561S human plasmi
	9 P	464	37.1	810	7	AAR13221 AAR34428		Human plasminogen Seguence encoded b
	37	464	37.1	810	8	AAW31169		Plasminogen protei
	8 6 8 6	464 464	37.1	810 810	0	AAY08685 AAY02114		Human plasminogen SEC ID 77 of WO991
	4.	464	37.1	810	,	AAY82690		Human plasminogen
	42	404	37.1 37.1	810	<b></b> 10	ABB81496		Amino acid sequenc Human plasminogen
	43	464	37.1	810	m	ABB83795		Human plasminogen.
	4 4	44	36.9	812	20	AAK83959 AAW07585		Complete mouse pla Murine plasminogen
						ALIGNMENT	SILS	
1.7	317	- C	1			;		
		AAB11711 sta	tandard;	Protein;	L	264 AA.		
. ~ .	-	AAB11711;						
`-	or 2	3-OCT-2000	(first	c entry	Ξ			
		Mouse serine	protease	ase BSSP5	355	(mBSSP5)	SEO ID NO:4.	
						( a saam)		
		SSP5; serine	e prote	sase; ]	human odw.	n; hBSS	mouse; mBSSP5	; brain;
		epilepsy; ca	cancer; inflammati	inflam hv	nati	on; infer	ility; pancrea	tis;
		Mus sp.						
		WO200031243-	-A1.					
	υ Ω	2-JUN-2000.						
	P.Y.	9-NOV-1999;	6	9WO-JP0647	173.			
	7 X X	0-NOV-1998;	98JP	P-034780	306.			
	_	FUSO ) FUSO	PHARM	IND L	LTD.			
		Uemura H, O	Okui A,	Kominami	nami	К, Уаша	Yamaguchi N, Mitsui	S;
	AX DR DR W	WPI; 2000-400058 N-PSDB; AAA61734	£ 3					
	YX PT S	erine proteases		BSSP5, 1	useful		in detecting homologs, mutants	mutants and

Yamaguchi N, Mitsui S;

Kominami K,

WPI; 2000-400058/34. Uemura H, Okui A,

(FUSO ) FUSO PHARM IND LTD

99WO-JP06473. 98JP-0347806

19-NOV-1999; 20-NOV-1998;

```
The invention relates to novel serine proteases designated BSSP5

(AAB11710-B11711), and to nucleic acids encoding them (AAA61733-A61744).

(The invention also relates to vectors and transformants comprising BSSP5 nucleic acids; transgenic animals in which the expression level of BSSP5 nucleic acids; transgenic animals in which the expression level of BSSP5 nucleic and an mBSSP5 knockout mouse. The invention additionally encompasses anti-BSSP5 antibodies and methods of production of such artibodies, methods of BSSP5 detection using the antibodies, and the use of BSSP5 proteins or fragments as diagnostic markers for certain medical conditions or fragments as diagnostic markers for certain pancreatitis comprising measuring BSSP5 concentration in the blood or urine, and a pancreatitis diagnostic agent containing an anti-BSSP5 isolated in a human brain cDNA library using degenerate PCR primers (AAA61745) based on conserved regions of serine proteases. The BSSP5 serine proteases and nuclectides encoding them are useful in detecting homologues, mutants and polymorphic variants in biological samples (e.g., blood, urine, brain, prostate gland, placenta, testis, pancreas and spleen) as diagnostic markers for conditions such as Alzheimer's alsease, epilepsy, cancer, inflammation, infertility, pancreatits and prostatic hypertrophy. Sequence AAB11711 represents murine BSSP5 human brain and sequence AAB11711 represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94 SNAEPVQVLSIARAITHPNWNANTWNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVYTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BSSP5; serine protease; human; hBSSP5; mouse; mBSSP5; brain; diagnostic marker; antibody; transgenic animal; Alzheimer's disease; epilepsy; cancer: inflammation; infertility; pancreatitis; prostatic hypertrophy.
presumer variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 1252; DB 21; Length 264; 100.0%; Pred. No. 3e-102; 1ve 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human serine protease BSSP5 (hBSSP5) SEQ ID NO:2.
                                                                                                   Claim 3; Page 55-56; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB11710 standard; Protein; 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100.
Matches 231; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200031243-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB11710;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB11710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

1

```
The invention relates to novel serine proteases designated BSSP5

(AAB1710-B11711), and to nucleic acids encoding them (AAA61733-A61734).

The invention also relates to vectors and transformants comprising BSSP5
nucleic acids; transgenic animals in which the expression level of BSSP5
nucleic acids; transgenic animals in which the expression level of BSSP5
can be varied; and an mBSSP5 knockout mouse. The invention additionally
encompasses anti-BSSP5 attibodies and methods of production of such
antibodies, methods of BSSP5 detection using the antibodies, and the
use of BSSP5 proteins or fragments as diagnostic markers for certain
medical conditions, e.g., pancreatitis. A method for detecting
medical conditions, e.g., pancreatitis and approach to a pancreatitis diagnostic agent containing an anti-BSSP5
urine, and a pancreatitis diagnostic agent containing an anti-BSSP5
antibody is also disclosed. Nucleotides encoding BSSP5 were initially
isolated in a human brain cDNA library using degenerate PCR primers
(AAA61745, based on conserved regions of serine proteases. The
BSSP5 serine proteases and nucleotides encoding them are useful in
detecting homologues, mutants and polymorphic variants in biological
samples (e.g., blood, urine, brain, prostate gland, placenta, testis,
pancreas and spleen) as diagnostic markers for conditions such as
Alzheimer's adseases, epilepsy, cancer, inflammation, infertility,
pancreatitis and prostatic hypertrophy. Sequence AAB11711 represents
by an experience and sequence AAB11711 represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Serine proteases BSSP5, useful in detecting homologs, mutants and polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human pancreatic cancer antigen protein sequence SEQ ID NO:529.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214 SGGPLVCQKGNTWVLIGIVSWGTKNCNVRAPAVYTRVSKFSTWINQVIAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88.8%; Score 1112; DB 21
85.7%; Pred. No. 6.3e-90;
ive 22; Mismatches 11
                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 51-52; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB54077 standard; Protein; 192 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 198; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           264 AA;
                                                                                                                                                                                            N-PSDB; AAA61733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mBSSP5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB54077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XXAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
```

ö

cancer; immune-related disorder; cardiovascular disease;

Amino acid sequence of novel human protease #37.

protease;

23-APR-2002 (first entry)

AAU82738;

AAU82738 standard; Protein; 263 AA.

AAU82738

neuronal-associated disease; metabolic disorder; inflammatory disorder; ervous system disorder; sexual dysfunction; pain; mood disorder; hypertension; psychotic disorder; neurological disorder; dyskinesia; viral infection; human immunodeficiency virus; HIV; non-viral infection;

ocular disease; cytostatic; enzyme.

26-JUN-2001; 2001WO-US20171. 26-JUN-2000; 2000US-214047P.

WO200200860-A2.

03-JAN-2002.

Homo sapiens.

```
proteins, called pancreatic cancer antigens, given in AAB54008 to
AAB5466. The human pancreatic cancer antigens have cytostatic,
neuroprotective, nootropic, immunomodulatory, relaxant, contraceptive,
gynaecological, cardiant and antilifammatory activities, and can be used
in gene therapy. The polynucleotide and proteins can be used for
preventing, treating, or ameliorating a medical condition or in assays
for diagnosing a pathological condition or a susceptibility to one in a
subject. Binding partners to the proteins and the activity of the
proteins can be identified. The pancreatic cancer antigens can be used to
detect, treat or prevent pancreatic disorders, especially cancer.
Agonists and antagonists to the antigens can be used to design nucleic
and antagin probes that can be used in chromosome mapping, linkage
analysis, tissue identification and/or typing and a variety of forensic
and diagnostic methods. The proteins can be used to generate antibodies
which are used to purify, detect and target the polypeptides, including
both in vivo and in vitro diagnostic and therapeutic methods. The
proteins can be used to treat or prevent neural, immune system, muscular,
reproductive, gastrointestinal, pulmonary, cardiovascular, renal or
proteins as be used to treat or prevent neural, immune system, muscular,
reproductive, gastrointestinal, pulmonary, cardiovascular, renal or
proliferative disorders. AAC99232 to AAC99240 and AAB54467 represent
sequences used in the exemplification of the present invention.
                       Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAC98773 to AAC99231 encode the human pancreatic cancer associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 966; 1379pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0124270.
                                                                                                                                                                                                                                                                                                                                                                         08-MAR-2000; 2000WO-US05989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-579444/54.
N-PSDB; AAC98842.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 AA;
                                                                                                                                                                                                                                                                        WO200055320-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                          12-MAR-1999;
                                                                                                                                                                                                                                                                                                                        21-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
```

Nucleic acids encoding novel human proteases, useful for useful for treating diseases and disorders such as cancers, immune-related diseases and disorders, cardiovascular disease (e.g. restenosis) and

Inflammatory disorders

Caenepeel S;

Sudarsanam S, Manning G,

Whyte D,

Plowman G, Wł Charydczak G;

(SUGE-) SUGEN INC

WPI; 2002-139913/18.

N-PSDB; ABK31780

```
The present invention relates to the isolation of novel human proteases, and the nucleic acids encoding them. The sequences of the invention are useful for treating diseases and disorders such cancers (e.g. breast, colon, lung), immune-related diseases and disorders (e.g. inflammatory diseases and asthma), cardiovascular diseases (e.g. restenosis and coronary thrombosis), brain or neuronal-associated diseases, metabolic disorders (e.g. diabetes) central or peripheral nervous system diseases, migraines, pain, sexual dysfunction, mood disorders, attention disorders, cognition disorders, hypotension, psychotic disorders, neurological disorders, hypotension, hypertension, psychotic disorders, neurological disorders, and dyskinesias.

(e.g. Alzheimer's disease, parkinson's disease) and dyskinesias.

(e.g. Alzheimer's disease, parkinson's disease) and dyskinesias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infections such as ocular disease (e.g. glaucoma) and macular degeneration. AAU82702-AAU82760 represent the novel human proteases of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDGG 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 1.5e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60.3%; Score 755.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 6; Fig 2M; 313pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 135; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
0
```

Gaps

60.4%; Score 756; DB 21; Length 192; 84.4%; Pred. No. 9.2e-59; .tve 16; Mismatches 9; Indels (

Query Match
Best Local Similarity 84.43
Matches 135; Conservative

1;

150 TCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWGS 189 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGA 160

8

g ð

121 LCATTGWGKTKYNANKTPDKLQQAALPLLSNAECKKSWGRRITDVMICAGASGVSSCMGD 180

SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231

181

ò

```
1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to human tumour antigen-derived gene 15 (TADG-15) protein and coding sequence (see AAH33601 and AAB98500).
TADG-15 is an extracellular serine protease. It was found that TADG-15 is over-expressed in ovarian tumours. TADG-15 protein or its fragments of 9-20 residues that lack TADG-15 protease activity are useful for vaccinating an individual against TADG-15, having, suspected of having or at risk of getting cancer. Furthermore, the TADG-15 gene can be used as a diagnostic or therapeutic target in cancer. The present sequence was used in a sequence homology alignment with the catalytic domain of TADG-15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel extracellular serine protease, termed tumor antigen-derived gene
                                                   153 LCATTGWGKTKYNANKTPDKLQQAALPLLSNAECKKSWGRRITDVMICAGASGVSSCMGD 212
                                121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
93 SDEENIQVLKIAKVFKNPKFSILTVNNDITLLKLATPARFSQTVSAVCLPSADDDFPAGT 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 protein overexpressed in carcinomas and DNA encoding it, for diagnosis, treatment, prevention of cancer, particularly breast,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 231;
                                                                                                                                                                                                                                                                                                                                                          Human; TADG-15; cytostatic; vaccine; ovarian tumour; cancer;
tumour antigen-derived gene 15; serine protease; chymotrypsin.
                                                                                                                  SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61; Indels
                                                                                                                                                                                                                                                                                                                           Human chymotrypsin serine protease catalytic domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 750.5; DB 2;
Pred. No. 3.5e-58;
5; Mismatches 61,
                                                                                                                                                                                                                         ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 10; Fig 1; 130pp; English.
                                                                                                                                                                                                                       AAB98504 standard; Protein; 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59.9%;
58.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-OCT-2000; 2000WO-US29095.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0421213.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tanimoto H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-381031/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200129056-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ovarian cancer
                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-0CT-1999;
                                                                                                                                                                                                                                                                                         03-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O'Brien TJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-APR-2001
                                                                                                                                                                                                                                                       AAB98504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                  181
                                                                                                                                  213
                                                                                                                                                                                       RESULT 5
                                                                                                                                                                                                         AAB98504
                                õ
                                                                  g
                                                                                                   ö
```

121 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180

61

g ò 셤 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120

2 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQG

```
ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a review of sequence homologies of several plasminogen activators. Plasminogen is the principal serine protease zymogen in the extracellular fluids of vertebrates. Its active form, plasmin, is implicated in pericellular proteolysis associated with a wide range of physiological and pathological processes. Plasminogen expression is regulated by plasminogen activators which hydrolyse a peptide bond in plasminogen to convert it to plasmin or form tight binding complexes with plasminogen to spontaneously convert it to plasmin. The sequence homology analysis has identified a six amino acid peptide involved in plasminogen activation. This peptide is particularly useful when inserted between amino acid residues 644 and 645 of full length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           plasminogen. Novel plasminogen activators have been made based upon the plasminogen activation/recognition site of plasminogen binding proteins. The polypeptides are useful in preparing thrombolytic agents for treating blood clotting disorders such as heart attack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polypeptide with plasminogen activator activity useful as thrombolytic agent for treating blood clot disorders e.g. heart attack, comprises 10 amino acid peptide fragment for recognition or activation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is bovine chymotrypsinogen. It was included in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 21; Length 245;
Indels
                                                                                                                                                                                                                                        thrombolytic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 727.5; DB 21;
Pred. No. 4e-56;
2; Mismatches 67;
                                                                                                                                                                                                                                      Bovine; plasminogen activator; cardiant; thror
heart attack; stroke; blood clotting disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 35-36; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (OKLA-) OKLAHOMA MEDICAL RES FOUND.
                                                                                                AAY99596 standard; protein; 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tang JJN;
                                                                                                                                                                                                                                                                                                                                                                                            99WO-US09991
                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0110588
                                                                                                                                                                    13-SEP-2000 (first entry)
                                                                                                                                                                                                      Bovine chymotrypsinogen A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 56.7%
Matches 131; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-422975/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang XC,
                                                                                                                                                                                                                                                                                                                        WO200032759-A1.
                                                                                                                                                                                                                                                                                                                                                                                            06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                            02-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                          08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasminogen
                                                                                                                                                                                                                                                                                          Bos taurus.
                                                                                                                                  AAY99596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lin X,
            181
                                                                                AAY99596
ID AAY9
                                                                RESULT 6
            g
                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
```

```
Sequence
                              AAP70758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                   QQ
                              g
                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                          ٠.
د.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 180
                                                                                                                                                                                                                                                                                                                                                                                                                    DRSSNAEPVQVLSIARAITHPNWNANTMN-`-NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                             LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                           The porcine elastase product may be efficiently expressed from a transformed host such as colibacillus or yeast, yielding the product more efficiently than spleen extraction.

See also J61192288.
                                                                                                                                                                                                                                                                                                                                                                                        1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                12;
                                     SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                     base
                                                                                                                                                                                                                                                                                                                                                          40.2%; Score 503; DB 7; Length 269; 44.2%; Pred. No. 2.5e-36;
                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                    Biological prepn. of pig elastase II - using DNA with sequence coding for specified aminoacid sequence.
                                                                                                                                                                                                                                                                                                                                                                         82;
                                                                                                                                                                                                                                                                                                                                                                         41; Mismatches
                                                                                 Ź
                                                                               AAP61724 standard; Protein; 269
                                                                                                                                                                                                                                                                                          Claim 1; Fig 1; 11pp; Japanese.
                                                                                                                                                                                                    85JP-0034050
                                                                                                                                                                                                                  85JP-0034050
                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 44.2
Matches 107; Conservative
                                                                                                                                                                                                                                (KIRI ) KIRIN BREWERY KK.
                                                                                                                                                                                                                                             WPI; 1986-262895/40.
N-PSDB; AAN60919.
                                                                                                                           Porcine elastase II.
                                                                                                                                        Colibacillus; yeast.
                                                                                                                                                                                                                                                                                                                                             269 AA;
                                                                                                                                                                      JP61192289-A.
                                                                                                                                                                                                    22-FEB-1985;
                                                                                                                                                                                                                  22-FEB-1985;
                                                                                                                                                                                     26-AUG-1986.
                                                                                                           23-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XN 231
                                                                                                                                                        Sus scrofa.
                                                                                              AAP61724;
                                                                                                                                                                                                                                                                                                                                             Seguence
                                                                                                                                                                                                                                                                                                                                                           Query Match
             135
                                                                                                                                                                                                                                                                                                                                                                                                                    28
                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                  116
                                                                                                                                                                                                                                                                                                                                                                                                                                                               149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          268
121
                            181
                                         195
                                                                        AAP61724
                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
             음
                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
```

```
116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174 -ASSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        208 IISSCNGDSGGPLNCQGANGQWQVGIVSFGSSLGCNYYHKPSVFTRVSNYIDWINSVIA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence encoding pancreas elastase may be used to transform an expression system. The product is useful in rejuvenating the elasticity of the arterial wall, and improving unusual serum lipid levels and lipoprotein metabolism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29 VVGGEDARPNSWPWQVSLQYDSSGQWRHTCGGTLVDQSWVLTAAHCISSSRTYRVVLGRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pancreas elastase prodn. used to improve lipoprotein metabolism comprises isolating RNA coding elastase, synthesising single and double chain cDNA and introducing recombinant into host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40.2%; Score 503; DB 8; 44.2%; Pred. No. 2.5e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41; Mismatches
                                                                                                                                                                                                                                                                                                                                      /note= "May be absent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 480; 18pp; Japanese
                                                                                                                                                                                                                                                                            Location/Qualifiers 2..16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR29621 standard; Protein; 253 AA.
  ¥.
AAP70758 standard; Protein; 269
                                                                                                                                                                                            Lipoprotein metabolism; lipid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85JP-0138494.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 107; Conservative
                                                                                                                                               Pig pancreas elastase-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1987-040875/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SANY ) SANKYO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAN71121
                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                            19-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                        JP62000276-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                      06-JAN-1987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            230 YN 231
                                                                                                                                                                                                                                            Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
AAR29621
ID AAR2
```

```
86EP-0302557
                                                                                                                                                 Takiguchi Y,
Ohsumi J;
                                                                                    05-APR-1985;
27-APR-1985;
26-JUL-1985;
02-DEC-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
         Homo sapiens
                                                           07-APR-1986;
                                                                             23-OCT-1985;
                                          22-OCT-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268 NN 269
                        EP198645-A.
                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAP60061;
ð
                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                           ă
                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                               DRSSNAEPVQVLSI--ARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                                                                                                             172 SGASSCQGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                                                                     114 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG 171
                                                                                                                                                                                                                                                                                                                                                                          12 VVNGEDAVPYSWPWQVSLQYEKNGVFQHTCGGSLIAPDWVLTAGHCISSSLTYQVVLGEY 71
                                                                                                                                                                                                                                                                                                                                                                1 IVNGENAVPGSWPWQVSLQ-DNTGF--HFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                           swine; bile acid; gall bladder; bile acid secretion promoters;
                                                                                                                                                                                                                                                                This sequence represents porcine pancreatic elastase III. It was expressed in E. coli YA21 using the expression vector \mathtt{pELE001}. It may be used in bile acid secretion promoters and liver function
                                                                                                                                                                                                                                                                                                                             40.0%; Score 500.5; DB 13; Length 253; 43.2%; Pred. No. 3.9e-36; Live 42; Mismatches 82; Indels 13;
                                                                                                                                                                                                                      Pig pancreas elastase protein - used in bile acid secretion promoters and liver function improvers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence of human pancreatic elastase IIA encoded on pH2E2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enzyme; serum lipoprotein metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP60062 standard; Protein; 269 AA.
                                                                                                                                                                                                                                               Claim 1; Page 8; 10pp; Japanese.
                                           Porcine pancreatic elastase III
                                                                    liver function improvers; ss
                                                                                                                                                           91JP-0092069
                                                                                                                                         91JP-0092069
                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                            (SANY ) SANKYO CO LTD.
                                                                                      Sus scrofa domestica.
                                                                                                                                                                                             WPI; 1992-428826/52.
                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                             253 AA;
                                                                                                                                                                                                       N-PSDB; AAQ31724
                                                                                                      JP04325090-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-SEP-1991
                                                                                                                                         23-APR-1991;
                                                                                                                                                           33-APR-1991;
                        30-APR-1993
                                                                                                                        13-NOV-1992
                                                                                                                                                                                                                                                                                                                                        Best Local Sim
Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229 A 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          251 A 251
                                                                                                                                                                                                                                                                                                              Seguence
        AAR29621;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAP60062;
                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                   28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
58 DRSSNAEPVQVLSIARAITHPNWNANTMN-·NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        174 A-SSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208 VISSCNGDSGGPLNCQASDGRWQVHGIVSFGSRLGCNYYHKPSVFTRVSNYIDWINSVIA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The genetically engineered prod. can eliminate the dependency on human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                                                                                                                  New genetically engineered human pancreatic elastase - obtd.
using hosts modified DNA coding for enzyme
                                                                                                                                                                                                               Ohmine T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 7; Length 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 38.8%; Score 486; DB 7; Length 26 Best Local Similarity 43.0%; Pred. No. 8e-35; Matches 104; Conservative 41; Mismatches 85; Indels
                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                 Eurukawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence of human pancreatic elastase IIIB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Enzyme; serum lipoprotein metabolism
                                                                                                                                                                                                               Kawashima I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Example; Page 14-15; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP60061 standard; Protein; 242 AA.
85JP-0236686.
85JP-0072308.
85JP-0091986.
85JP-0163964.
85JP-0271128.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                 Tani T,
                                                                                                                                                                                                                                                                                          WPI; 1986-280300/43.
N-PSDB; AAN60076.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269 AA;
                                                                                                                                                           (SANY ) SANKYO KK.
```

8;

```
30-MAR-2001; 2001WO-US08631.
        86EP-0302557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200175067-A2
                                                                                    Takiguchi Y,
Ohsumi J;
                                      27-APR-1985;
26-JUL-1985;
02-DEC-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
       07-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-OCT-2001.
                       23-OCT-1985
05-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                    YN 231
                                                                                                                                                                                                                                                                                                                                                                                                   NN 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG20513;
                                                                                                                                                                                                           Sequence
                                                                                                                                            using
                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG20513
 g
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                ő
                                                                                                                                                                                                                                                                                                                                             171
                                                                                                                                                                                                                                                                                                              DRSSNAEPVQVLSI--ARAITHPNWNANTM--NNDLTLLKLASPARYTAQVSPVCLASTN 113
                                                                                                                                                                                                                                                                                                                       ||: | ||: | | || || DRAVKEGPEQVIPINSGDLFVHPLWNRSCVACGNDIALIKLSRSAQLGDAVQLASLPPAG 120
                                                                                                                                                                                                                                                                                                                                                                            SGASSCOGDSGGPLVC-OKGNTWVLIGIVSW-GTKNCNI-QAPAMYTRVSKFSTWINQVM 228
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                               1 IVNGENAVPGSWPWQVSLQ-DNTG--FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                        EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGG
                                                                                                                                                                                                   ö
                                                                                                                                                                                                The genetically engineered prod. can eliminate the dependency on human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                13;
                                                                                                                                                                                                                                               DB 7; Length 242;

    obtd

                                                                                                            Ohmine T;
                                                                                                                                                                                                                                                                 86; Indels
                                                                                                                                                         New genetically engineered human pancreatic elastase using hosts modified DNA coding for enzyme
                                                                                                            Eurukawa H,
                                                                                                                                                                                                                                              38.5%; Score 481.5; DB 7
42.7%; Pred. No. 1.7e-34;
Live 39; Mismatches 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence of human pancreatic elastase IIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enzyme; serum lipoprotein metabolism
                                                                                                           Kawashima I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP60058 standard; Protein; 252 AA
                                                                                                                                                                                 Claim 2; Page 8; 45pp; English
                                            85JP-0236686.
85JP-0072308.
85JP-0091986.
85JP-0163964.
85JP-0271128.
                              86EP-0302557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                        Best Local Similarion
Matches 103; Conservative
                                                                                                           Takiguchi Y, Tani T;
                                                                                                                                  WPI; 1986-280300/43.
N-PSDB; AAN60075.
                                                                                                                                                                                                                                 242 AA;
                                                                                           (SANY ) SANKYO KK.
                                                            27-APR-1985;
26-JUL-1985;
02-DEC-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                              07-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-OCT-1986
               22-OCT-1986
                                                       05-APR-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP198645-A.
EP198645-A
                                                                                                                                                                                                                                                                                                                                                                                                           A 229
                                                                                                                                                                                                                                                                                                                                                                                                                          A 240
                                                                                                                                                                                                                                  Sequence
                                                                                                                    Ohsum1 J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP60058;
                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                             28
                                                                                                                                                                                                                                                                                                                                            114
                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP60058
8
                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                           음
                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
```

```
DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174 A-SSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The genetically engineered prod. can eliminate the dependency on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.7%; Score 471.5; DB 7; Length 252; 42.6%; Pred. No. 1.4e-33; Live 41; Mismatches 85; Indels 13
                                                                                                                                                                                                                                                                                                                                                   genetically engineered human pancreatic elastase - obtd.
ng hosts modified DNA coding for enzyme
                                                                                                                                                                                                     ij
                                                                                                                                                                                                     Ohmine
                                                                                                                                                                                                     Eurukawa H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel human diagnostic protein #20504.
                                                                                                                                                                                                     Kawashima I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Page 3-4; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABG20513 standard; Protein; 279
85JP-0236686.
85JP-0072308.
85JP-0091986.
85JP-0163964.
85JP-0271128.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 37.79
Best Local Similarity 42.69
Matches 103; Conservative
                                                                                                                                                                                                     Tani T,
                                                                                                                                                                                                                                                                     WPI; 1986-280300/43.
N-PSDB; AAN60072.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252 AA;
                                                                                                                                                      (SANY ) SANKYO KK.
```

```
Plasminogen; human; Kringle 5 peptide; anti-angiogenesis agent; cancer; metastatic solid tumour; carcinoma; sarcoma; lymphoma; haemangioma; psoriasis; arthritis; macular degeneration; diabetic retinopathy; autoimmune disease; ocular disease; capillary proliferation; therapy; kringle 5 receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58 DRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  174 A-SSCQGDSGGPLVCQKGNTWVLI-GIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVWA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The human elastase product may be efficiently expressed from a transformed host such as colibacillus or yeast, yielding the product more efficiently than spleen extraction. See also J61192289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        208 VISSCNGDSGGPLNCQASDGRCEVHGIVSFGSRLGCNYYHKPSVFTRVSNSIDWINSVIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149 LPNNYPCYVTGWGRLQTNGAV-PDVLQQGRLLVVDYATCSSSAWWGSSVKTSMICAGGDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116 LPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biologically producing human elastase ii – using DNA chain with biological prodn. capability for human elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Score 469; DB 7;
; Pred. No. 2.5e-33;
40; Mismatches 87.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW34285 standard; protein; 791 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Fig 1-2; 19pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.58;
                                                                                                                                                                                                                                                                         85JP-0034049
                                                                                                                                                                                                                                                                                                                      85JP-0034049
23-OCT-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity 42.6
Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                (KIRI ) KIRIN BREWERY KK.
                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1986-262894/40.
                                            Human elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human plasminogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAN60706
                                                                                       Colibacillus;
                                                                                                                                      Homo sapiens.
                                                                                                                                                                               JP61192288-A.
                                                                                                                                                                                                                                                                         22-FEB-1985;
                                                                                                                                                                                                                                                                                                                      22-FEB-1985;
                                                                                                                                                                                                                            26-AUG-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          230 YN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW34285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW34285
                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving to restore normal activity of (II) or to treat disease states involving annititating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating the polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human amino acid sequences of the inventor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e: The sequence data for this patent did not appear in the printed scification, but was obtained in electronic format directly from WIPO ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151 FPPAGTILPNNYPCXVTGLGESCRTNGAVPDVLQQGRLLAVDYATCSSSAWWGSSVKTSM 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 211 ICAGGAGVISSCNGDSGGPLNCQASDALWQVHGIVSFGSRLGCNYYHKPSVFTRVSNYID 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51 FVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARYTAQVSPVC 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 LASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YWGARITDAM 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       167 ICAGGSGA-SSCQGDSGGPLVCQKGNT-WVLIGIVSWGTK-NCN-IQAPAMYTRVSKFST 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 IVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAHC-----QVTPGRH 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37.6%; Score 471; DB 22; Length 279; 41.0%; Pred. No. 1.7e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                              Claim 20; SEQ ID No 50872; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP61723 standard; Protein; 269 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39;
                                                                                                                                    Tang YT;
                  31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                  Drmanac RT, Liu C,
                                                                                                                                                                               WPI; 2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271 WINSVIAYN 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 223 WINQVMAYN 231
                                                                                       (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279 AA;
                                                                                                                                                                                                    N-PSDB; AAS84700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            specification
                                                                                                                                                                                                                                                                                                                      biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP61723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
```

Matches

셤

ö a g ó 용 ò 셤

ò

RESULT 14 AAP61723

XXXX

8

12; Gaps

87;

Length 269; Indels

į

```
This sequence represents human plasminogen. Fragments of this sequence can be used in the compounds of the invention. Kringle 5 (K5) peptide fragments homologous to this sequence, are anti-anglogenesis agents.

Can be used in the compounds of the invention. Kringle 5 (K5) peptide fragments homologous to this sequence, are anti-anglogenesis agents.

Can pecifically for treating or preventing psoriasis, arthritis, metastatic solid tumours, carcinomas, sarcomas, lymphomas, haemangiomas.

They can also be used for treating or preventing psoriasis, arthritis, metular degeneration and diabetic retinopathy. The fragments can also be used to treat autoimmune or ocular diseases, capillary proliferation, ulcers etc., also as contraceptives that inhibit ovulation and establishment of the placenca. As antisers of (anti)agonists can be used similarly, optionally coupled to cytotoxic agents. Antagonists may be used to induce anglogenesis, e.g. for wound healing. The K5 peptides are also used to raise specific antibodies (Ab), for diagnosis and for aflinity purification of K5 receptors. The K5 receptors may then be cypeased in tumour cells to increase their response to the peptides or used for identification of smallar antagonists. The Ab are used to used to content of smallar antagonists. The Ab are used to used to the peptides in biological samples. The K5 peptides (and K5 fision proteins) selectively inhibit proliferation of endothelial cells with low toxicity against towine capillary cells in colliferation of unbility against bovine capillary cells in colliferation and colliferation of co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New kringle 5 peptide(s) and fusion proteins derived from plasminogen - useful as anti-angiogenesis agents for treating cancer, psoriasis, arthritis etc., including gene therapy
                                                                                                                                                                                                                                                                                                                                                                                      Davidson DJ, Gubbins EJ, Wang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11; Fig 1; 78pp; English
                                                                                                                                                                                        97WO-US07700.
                                                                                                                                                                                                                                            97US-0832087.
                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1997-558670/51.
                                                                                                                                                                                                                                                                                                                               (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              791 AA;
                       Homo sapiens.
                                                                          WO9741824-A2
                                                                                                                                                                                        05-MAY-1997;
                                                                                                                                                                                                                                            03-APR-1997;
                                                                                                                                                                                                                                                                         03-MAY-1996;
                                                                                                                                 13-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
```

```
7;
                                                                                                                                             58 DRSSNAEP-VQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEAL 116
                                                                                                                                                                 117 PSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY -- WGARITDAMICAG--GS 172
                                                                                                                                                                                                                                          Ouery Match 37.2%; Score 465.5; DB 18; Length 791; Best Local Similarity 41.8%; Pred. No. 1.8e-32; Matches 100; Conservative 30; Mismatches 92; Indels 17; Gaps
                                                                        1 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVVLGEY 57
                                                                                                                                                                                                                                                                                      173 GASSCOGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 231
                                                                                                                                                                                                                                                                                                             음
                                                                                                                                           õ
                                                                                                                                                                            윱
                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                      ò
                                                                        ò
```

Search completed: December 20, 2002, 15:16:43 Job time : 36.6087 secs

. 

Copyri	GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.	18 13 20
OM protein - protein search, using sw model	arch, using sw model	22
Run on: December	December 20, 2002, 15:14:08 ; Search time 4.08696 Seconds (without alignments) 1663.721 Million cell updates/sec	222 265 265
Title: US-09-85 Perfect score: 166 Sequence: 1 MLLLSL	US-09-856-3198-4_COPY_1_33 166 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33	30 8 8 7
Scoring table: BLOSUM62 Gapop 10.	BLOSUM62 Gapop 10.0 , Gapext 0.5	333 333 335 335 335 335 335 335 335 335
Searched: 671580 s	671580 seqs, 206047115 residues	9 8 9 5 9 5
Total number of hits sat	Total number of hits satisfying chosen parameters: 671580	37
Minimum DB seq length: 0 Maximum DB seq length: 200000000	200000000	2 6 4 2 0 0
		4

Database : SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fung1:*
4: sp_human:*
5: sp_human:*
6: sp_mhc:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_plant:*
10: sp_plant:*
11: sp_vordent:*
12: sp_virus:*
13: sp_virus:*
14: sp_virus:*
15: sp_virus:*
16: sp_bacteriap:*
17: sp_virus:*
16: sp_bacteriap:*
16: sp_bacteriap:*
17: sp_archeap:*

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

		œ			SUMMARIES	
Result No.	Score	Query Match	Query Match Length DB ID	DB	ID	Description
7	166	100.0		7	090060	USOS MUSCUIU
7	166	100.0		11	Q9D7P8	Q9d7p8 mus musculu
٣	166	100.0		11	09EQ28	Q9eqz8 rattus norv
4	166	100.0		11	Q9ER05	OperO5 mus musculu
ß	71	42.8		11	Q9DC86	Q9dc86 mus musculu
9	7.1	42.8		11	Q9D8X8	Q9d8x8 mus musculu
7	71			11	Q9CR35	Ogcr35 mus musculu
80	59.5	35.8	261	13	09W7O4	Q9w7q4 paralichthy
σ	59			17	Q8THZ0	Q8thz0 methanosarc
10	28			4	Q96R18	Q96r18 homo sapten
11	26			13	Q9W7Q3	09w7q3 paralichthy
12	55.5	33.4		σ	Q8SBN3	Q8sbn3 bacteriopha
13	55.5	33.4		Ŋ	999960	096666 drosophila
14	55.5	33.4		S	Q9V3B9	09v3b9 drosophila
15	55.5	33.4		17	097255	Q97z55 sulfolobus
. 91	55	33.1		16	O8ZLR7	O8zlr7 salmonella

Q823g0 salmonella Q94aj4 arabidopsis Q9sve9 arabidopsis Q9fw90 oryza sativ Q8xf78 rabistonia s	Vortes active descriptions Q9fea3 oryza sative Q8zb72 yersinia pe Q43752 citrus sine Q48542 hordeum vul Q91052 simian herp	H	080739 arabidopsis 055767 chilo iride Q9n0gl equus cabal Q95188 equus cabal Q8zf12 yersinia pe Q8vhd6 mus musculu	Q8wug5 homo sapien Q971H 8 treaptomyce Q96f38 homo sapien Q9v316 drosophila Q9h7m4 homo sapien Q9j1y6 rattus ratt
16 10 10 16	100110	13 10 11 10 10	10 12 6 6 16 11	4 QBWUGS 16 Q9KJTB 4 Q96F38 5 Q9V316 4 Q9H7M4 11 Q9JIY6
33.1 242 33.1 304 33.1 466 32.5 255 32.5 622	. თ. ო. ო. ო.		30.7 826 30.7 1186 30.4 248 30.4 248 30.4 384 30.4 536	
N N N N N N N N N N N N N N N N N N N	20000000000000000000000000000000000000	51.5 51.5 51.5 51.5 51	51 50.5 50.5 50.5 50.5	50.5 50.5 50 50 50 50
17 18 20 21 21	22222 2222 2024 2024	28 32 32 33	34 35 37 38	44444 0110642

## ALIGNMENTS

1 10960 PRELIMINARY; PRT; 264 AA. 10960:	01-JUN-2001 (TrEMBLrel. 17, Created) 01-JUN-2001 (TrEMBLrel. 17, Last sequence update) 01-JUN-2002 (TrEMBLrel. 17, Last annotation undate)	ik protein. 0004D15RIK.		Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murínae; Mus.	NCBI_TaxID=10090;	SEQUENCE FROM N.A.	STRAIN-C57BL/6J; TISSUE-PANCREAS; MEDLINE-21085660: Pubmed-11217851;		Arakawa I., hara A., Fukunishi I., Kondo H., Adachi J., Fukuda S., Aizawa K. Izawa M. Nishi K. Kivosawa H. Kondo S. Yamanaka I.	Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,	Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,		kueni P., Lewis S., Marsuo Y., Nikaido I., Pesole G., Quackenbush J., . Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,	Sakai K', Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,	lake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,	Brownstein M.J., Buit C., Fletcher C., Fujita M., Gariboldi M., Bustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,	Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,	Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,	SOSSAL H., SOSIO N., SCHOEMBOCH C., SCHOTT SOSSAL H., SOSIO N., SCHOEMBOCH C., SCHOTT SUSSIER H. TOVO-OKS K. MSANG K.H. MARITHE KAR MITHER MILLHING I.	Suzuki n., 1070-06a k., Mang K.n., Meitz c., Militakei c., Milming E., Wynshaw-Boris A., Yoshida K., Haseqawa Y., Kawaji H., Kohtsuki S.,	Hayashizaki Y.;	"Functional annotation of a full-length mouse cDNA collection.";	- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE	TRYPSIN FAMILY.
JLT 1 960 Q9D960 O9D960:	01-JUN- - NUC-10	18100041 CTRL OR	Mus mus	Eukaryo Mammali	NCBI_Ta:	SEQUENCI	STRAIN=	Kawai J	Atzawa	Saito T	Kadota	Fleisch	Schriml	Sakai K	Blake J	Gusting	Lyons P	Nordone	Susakı	Wynshaw	Hayashi	"Functi	-1- SIM	TRY
RESULT Q9D960 ID Q	555	S DE	SO	88	X N	RP	Z X	RA	Z Z	RA.	RA	RA:	8 &	RA	RA	8 &	RA	RA G	¥ 6	8 8	RA	R.	8	ပ္ပ

ö

```
1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
  UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
PROSITE; PS00134; TRYPSIN_HIS; PROSITE; PS00135; TRYPSIN_SER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2001 (TrEMBLrel. 16, 01-MAR-2001 (TrEMBLrel. 16, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRYPSIN FAMILY.
EMBL; AB020757; BAB20287.1;
HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hydrolase; Serine protease.
SEQUENCE 264 AA; 28116 M
                                                    Hydrolase; Serine protease.
SEQUENCE 264 AA; 28167 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTŘL ÓR CTRÀI.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEROPS; S01.256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chymopasin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9ER05
                                                                                                                                                                                                                                                                                                                                                                                                                                09E0Z8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
Q9ER05
                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
     S W DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RNX OCC SENT DE RESERVANTE DE LA COCC DE LA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-C57BL/63; TISSUB-TONGUE;

X KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

A Rakawa T., Jara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Arawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Ruchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fuljita M., Gariboldi M.,

Brons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

Mynshaw-Boolis A., Yoshida K., Rasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL: AK009019; BAB26029.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                  Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                28151 MW; 1D979719E07C16DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 166; DB 11;
100.0%; Pred. No. 2.1e-14;
vismatches 0;
                                                                                                                                                  PFAM: PF00089; LTYPSIN: 1.
PRINTS; PR0012: CHYMOTRYBEIN.
SMARY: SM00020; TTYP_SPC: 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_LES; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
SEQUENCE 264 AA; 28151 MW; 1D979719E07C.
                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MELESETESIVELGSSWGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                            MEROPS; S01.256; -...
MGD; MGI:88558; Ctrl.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR01254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEROPS; SO1.256; -.
MGD; MGI:88558; Ctrl.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21, 18100004D15R1k protein.
EMBL; AK007333; BAB24967.1;
HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09D7P8
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
```

```
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1;
Mammalia; Eutheria; Rodentia; Sciurognath1; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=RAT PANCREAS;
Sogame Y., Mitsui S., Kataoka K., Kashima K., Kato M., Sakagami J.,
Yamaguchi N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Molecular cloning of rat chymopasin.";
Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 264;
                                                       Length 264;
                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
28167 MW; 1D979469A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28116 MW; F9ED5D210FD3500E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Chymopasin (Chymotrypsin A CTRA-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 166; DB 11; 100.0%; Pred. No. 2.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                             sequence update)
                                                    Score 166; DB 11;
Pred. No. 2.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 AA.
                                                                                                                                                                                                                                                                                                                                                  264 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Pred. w.
                                                 Query Match 100.0%; Score 166; D
Best Local Similarity 100.0%; Pred. No. 2.1
Matches 33; Conservative 0; Mismatches
```

ö

```
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2200008D09Rik protein.
2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                 263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Similarity
Matches 14; Conserv
     TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2001 (
01-JUN-2001 (
01-JUN-2002 (
                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09D8X8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09D8X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
Q9D8X8
     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Araway T., Shingawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Araway T., Hara A., Shibata K., Yoshino H., Adachi J., Fukuda S., Araway T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Anzawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Kuehl P., Lewis S., Matsuo Y., Nikaido I., Resole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Ragner L., Washio T., Baka J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Andone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Norone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Norone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Whittaker C., Willming L., Wanghar R., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                  J)cernalett M.;
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -! - SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 166; DB 11; Length 264; 100.0%; Pred. No. 2.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                         "Molecular cloning of mouse chymopasin.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28135 MW; 1D979709A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfan; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
Hydrolase; Serine protease
                                                                                                                                                                                                                                                                                                                                                                   MGD: MGI:88558; Ctrl.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                   STRAIN-129S6/SVEVTAC; TISSUE-SPLEEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-C57BL/6J; TISSUE-SPLEEN;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                              EMBL; AB016228; BAB20275.1; -. EMBL; AF236365; AAL11034.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -JUN-2001 (TrEMBLrel. 17, -JUN-2001 (TrEMBLrel. 17, -JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
Mitsui S., Yamaguchi N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2200008D09R1k protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                         P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 AA;
                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                  MEROPS; S01.256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2200008D09RIK.
                                                                                                                                                            Bloernslett M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          982060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
Q9DC86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
DATE TO THE PROPERTY OF THE PR
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arakaya T., Hara A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakaya T., Hara A., Shibata K., Yoshino H., Adachi J., Fukuda S., Arakaya T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Alakaya T., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Ashorina T., Bono H., Kasukawa T., Saito R., Ashorina T., Bono H., Batalov S., Casavant T., Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Rebi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schrim L., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Ausonstein M.J., Bult C., Fletcher C., Fujita M., Carninci P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Winnshaw-Boolis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TRYPSIN FAMILY.
EMBL; AR007565; BAB25112.1; --
HSSP; P00766; IGCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                          42.8%; Score 71; DB 11; Length 263; 48.3%; Pred. No. 0.11;
                                                                                                                                                                                                                                                                                    27821 MW; 2620A27AFBA5D04D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 17, Created)
(TrEMBLrel. 17, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 AA
                                        MEROPS; SO1.152;
MGD; MGI:1913723; 2200008D09R1K.
INTERPRO; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; Lrypsin, 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SMO07020; TRYP_SFO.
IPROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LHIS; UNKNOWN_I.
PROSITE; PS00135; TRYPSIN_LSER; 1.
                                                                                                                                                                                                                                                                                                                                                                       5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-PANCREAS;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:1913723; 2200008D09Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
EMBL; AK003060; BAB22539.1; -. HSSP; P00766; 1GCT.
                                                                                                                                                                                                                                                                  Hydrolase; Serine protease.
```

```
PRELIMINARY;
                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=2214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEROPS; S01.256,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=8255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8THZO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8THZ0
                                                                                                                                                                                                                                                                                     09W7Q4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MA4368
                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OSTHZ0
                                                                                                                                                                                                                                                               09W7Q4
                                                                                                                                                                                                                                                                                                                SOW WHAT THE PROPERTY OF SORE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                         ŏ
                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., A Alzawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Reischmann W., Gasasterland T., Gissi C., King B., Kochiwa H., Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Batai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Ashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Whittaker C., Wilming L., Wanshaw-Bootis A., Yoshida K., Waetiz C., Whittaker C., Wilming L., Wanshaw-Bootis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                              ö
                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 400:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                           ;
                                                                                                                                             Score 71; DB 11; Length 263;
Pred. No. 0.11;
                                                                                                                                                                                         10; Indels
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine professes; Serine professes; Serine 253 AA; 27898 WW; C0638FB8F905A92F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28C4487AF1A26B27 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-C57BL/6J; TISSUE-STOMACH, SPLEEN, AND PANCREAS; MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                           5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SSF; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                         1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                  InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL, AK008927; BAB25971.1; --
EMBL, AK003079; BAB2253.1; --
EMBL, AK007765; BAB25241.1; --
EMBL, AK00815; BAB25280.1; --
EMBL, AK008129; BAB25861.1; --
EMBL, AK00888; BAB25861.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:1913723; 2200008D09Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27822 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21, 2200008D09R1k protein.
                                                                                                                                          Query Match 42.8%;
Best Local Similarity 48.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hydrolase; Serine protease.
SEQUENCE 263 AA; 27822 M
                                                                                                                                                                                           14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1GCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; S01
                                                                                                                                                                                                                                                                                                                                                                                                          09CR35
                                                                                                                                                                                                                                                                                                                                                                                                                              Q9CR35
                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                    Q9CR35
    S W S
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                     g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chymotrypsinogen 1.

Paralichthys olivaceus (Flounder).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;

Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;

Pleuronectoidei; Paralichthyidae; Paralichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
                                                          ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suzuki T., Srivastava A.S., Kurokawa T.;
"Japanese flounder mRNA for chymotrypasinogen 1.";
submitted (Jul-1999) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS:
TRYPSIN FAMILY.
EMBL; AB029753; BAA82365.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Galagan J.E., Nusbaum C., Roy A., Endrizzi M.G., Macdonald P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 261;
  Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Archaea; Euryarchaeota; Methanococci; Methanosarcinales; Methanosarcinaceae; Methanosarcina.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28184 MW; D7090A9D65395B7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Hydrogenase-3, subunit C (Hycc homolog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 35.8%; Score 59.5; DB 13; Best Local Similarity 48.5%; Pred. No. 3.8; Matches 16; Conservative 5; Mismatches 9;
     DB 11;
Query Match 42.8%; Score 71; DB 11
Best Local Similarity 48.3%; Pred. No. 0.11;
Matches 14; Conservative 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMARY; SM0020; Tryp_SPC; 1.
PROSITE; PS00130; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_HIS; UNKNOWN_1.
Hydrolase; Serine protease.
SEQUENCE 261 AA; 28184 MW; D7090A9D65395
                                                                                                                                                                                                                                                                                                                   261 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            648 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 3.0,
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MLLLSLTLSLVLLGSSWGCGVPAITPALS-YNQ 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-C2A / ATCC 35395 / DSM 2834;
MEDLINE-21929760; PubMed-11932238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Methanosarcina acetivorans
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
scrinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
Pleuronectoidei; Paralichthyidae; Paralichthys.
                                                                                                                                                                     TISSUE-PANCREAS;
Suzuki T., Srivastava A.S., Kurokawa T.;
Japanese flounder mRNA for chymotrpsinogen 2.";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27793 MW; 9F583044E22F78C0 CRC64;
                                                                                                                                                                                                                                                                                                                                                            MEROPS; SOL.152; ...
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001234; Ser_protease_Try.
Pfam: PF00089; trypsin: 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART: SW00020; Tryp_SPC: 1.
PROSITE; PS0240; TryPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_LSR; 1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                  EMBL; AB029754; BAA82366.1; -. HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 LAFAGAAYGCGSPAIPPVIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery Match
Best Local Similarity 30...
Loca 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 45.0 nes 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260 AA;
                                                                                                                                [1]
SEQUENCE FROM N.A.
                                                                                                       NCBI_TaxID=8255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gp21 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   096666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8SBN3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8SBN3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08SBN3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             999960
            SO DE RESERVA DE RESER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                                                                                                                                                                          "The genome of Methanosarcina acetivorans reveals extensive metabolic and physiological diversity.", Genome Res. 12:532-542(2002).
EMBL; AE011156; AAM07710.1; -.
FitzHugh W., Calvo S., Engels R., Smirnov S., Atnoor D., Brown A., Allen N., Naylor J., Stange-Thomann N., DeArellano K., Johnson R., Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W., Zimmer A., Barber R.D., Cann I., Graham D.E., Grahame D.A., Guss A.M. Hedderich R., Ingram-Smith C., Kuetiner H.C., Krzycki J.A., Leigh J.A., Li W., Liu J., Mukhopadhyay B., Reeve J.N., Smith K., Springer T.A., Umayam L.A., White O., White R.H., de Macario E.C., Ferry J.G., Jarrell K.F., Jing H., Macario A.J.L., Paulsen I., Metchett M., Sowers K.R., Swanson R.V., Zinder S.H., Lander E., Metcalf W.W., Birren B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fuchs T., Malecova B., Linhart C., Sharan R., Khen M., Herwig R., Shaulevich D., Elkon R., Steinfahl M., O'Briten J. K., Radelof U., Lehrach H., Olender Z., Gluesman G., Lancet D., Shamir R.; "DEFOG: A Practical Scheme for Deciphering Families of Genes."; "DEFOG: A Practical Scheme for Deciphering Families of Genes."; EMBL; AF399627; AAM95112.1; -
InterPro; IPR000276; GPCR_Rhodpsn.
PROSTIE: PS0001; Trul: 1.
PROSTIE: PS00237; G_PROTEIN.RECEP.F1_1; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                               Length 648;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.9%; Score 58; DB 4; Length 216; 60.0%; Pred. No. 5; 11ve 2; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MLLLSLTLSLVL------LGSSWGCGVPAITPALSYN 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 1
216 216
216 AA, 23670 MW: 57E6534FB0B22C75 CRC64;
                                                                                                                                                                                                                                                                                                                                                                 648 AA; 70386 MW; 97CA36C7442E004B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09W703;
01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260 AA.
                                                                                                                                                                                                                                                                                                                                                                                                             35.5%; Score 59; DB
22.4%; Pred. No. 11;
1ve 8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chymotrypsinogen 2.
Paralichthys olivaceus (Flounder).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olfactory receptor (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 LLLSLTLSLVLLGSSWGCGV 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67 LLLSHRVCLQLAGSAWACGV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 60.0°
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                        Complete proteome. SEQUENCE 648 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      096R18
096R18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09W703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
Q9W7Q3
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   096R18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF DIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đ
       ö
```

```
ä
                           ö
                                                                                                                                                                                                                                                                                                                                                                            Gaps
                            Gaps
                                                                                                                                                                                                               bacteriophage phi3626.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
NCBI_TaxID=190478;
                                                                                                                                                                                                                                                                                                                                                                            ä
                           ö
                                                                                                                                                                                                                                                                                                                                                   Length 140;
33.7%; Score 56; DB 13; Length 260; 45.0%; Pred. No. 11; tive 5; Mismatches 6; Indels
                                                                                                                                                                                                                                                   10; Indels
                                                                                                                                                             21, Created)21, Last sequence update)21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                   Score 55.5; DB 9;
Pred. No. 7.2;
                                                                                                                                                                                                                                                                                                                                          33.7%; Scor.
38.7%; Pred. No. /...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           441 AA
                                                                                                                                       140 AA
                                                                                                                                                                                                                                                                                                                                                                                                                  4 IIAILLSVLVFGSLLWGCGDKEETTNLNINQ 34
                                                                                                                                                                                                                                                                                                                                                                                                     3 LLSLTLSLVLLGS-SWGCGVPAITPALSYNQ 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1999 (TrEMBLrel. 10, Created) 01-MAY-1999 (TrEMBLrel. 10, Last seque 101-UNY-2002 (TrEMBLrel. 21, Last ann IMAGINAL DISC growth factor 3. IDGF3 OR CG4559.
                                                  10 LVLLGSSWGCGVPAITPALS 29
                                                                          26
```

```
STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-BERKELEY;
                                                                                                                                                                                                                                                               STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q97255
Q97255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
Q97255
 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PT TT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Adams M.D., Celniker S.E., Holf R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S. Ashburner M., Henderson S.N.,
Amanatides P.G., Scherer S.E., In P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S. Ashburner M., Henderson S.N.,
A Barton G.G., Wortman J.R., Yandrea, R.G., Champe M., Pfeiffer B.D.,
A Brandon R.C., Rogers Y.-H.C., Blazej R.G., Nelson C.R., Miklos G.L.G.,
A Mari J.F., Apbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Besson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
A Borkova D., Botchan M.K., Bouck J., Brokstein P., Brottier P.,
Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
A Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
A Dodson K., Doup L.E., Downes M., Dudan-Rocha S., Dunkov B.C.,
Brosler C., Gabriellan A.E., Garrell J.H., Gu Z., Guan P., Harris M.,
Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
A Hostin D., Houston K.A., Howland T.J., Weil M.-H., Ibegwam C.,
Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
Kimmel B.E., Kodira C.D., Kraft C., Eijang Y., Lin X.,
A Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
                                                                                                                                                                                                                                                                                                                                                                                       ï
                                                                                                                                                                   SEQUENCE FROM N.A.

Kawamura K., Shibata T., Saget O., Peel D., Shibata T., Bryant P.J.;

"A new family of growth factors produced by the fat body and active on brosophila imaginal disc cells.";

Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.

EMBL; AF102238; AAC99419.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda: Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID-7227;
            Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                         Length 441;
                                                                                         SEQUENCE FROM N.A.

Kawamura K., Shibata T., Peel D., Park S.-B., Bryant P.J.;

Kayamuras-related growth factors in Drosophila.";

Mol. Biol. Cell 8:358-358(1997).
                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                         Flybass; FBqn0020414; Idgf3.
InterPro; IPR001223; Glyco_hydro_18.
Pfam; PF00704; Glyco_hydro_18; 1.
Probom; PP000471; Glyco_hydro_18; 1.
SEQUENCE 441 AA; 49219 MW; 988C297D09CA0B08 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-WAY-2000 (TrEMBLrel. 21, Last annotation update)
1DGF3 OR CG4559.
                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                         DB 5;
                                                                                                                                                                                                                                                                                                                                                                                      5; Mismatches
                                                                                                                                                                                                                                                                                                                                                       33.4%; Score 55.5; 148.3%; Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                    210 LLLSLTV-LPNVNSSWYYDAPSIAPSLDF 237
                                                                                                                                                                                                                                                                                                                                                                                                                    2 LLLSLTLSLVLLGSSWGCGVPAITPALSY 30
 Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                      14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                           NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-BERKELEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9V3B9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09V3B9
                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09V3B9
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
Mount S.M., Moy M., Murphy B., Murphy I., Muzny D.M., Nelson D.L.,
Nelson D.R., Nelson R.A., Nixon K., Nusskern D.R., Pacleb J.M.,
Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
A. Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
Mang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
Milliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
A. Fe J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zhao G.,
Cheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu X., Smith H.O.,
Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ashburner M., Misra S., Roote J., Lewis S.E., Blazej R., Davis T.,
Ashburner M., Misra S., Roote J., Lewis S.E., Blazej R., Davis T.,
Doyle C., Galle R., George R., Harris N., Hartzell G., Harvey D.,
Hong L., Houston K., Hoskins R., Johnson G., Martin C., Moshrefi A.,
Palazzolo M., Reese M.G., Spradiling A., Tsang G., Wan K., Whitelaw K.,
Celniker S., Rubin G.M.;
An exploration of the sequence of a 2.9-Mb region of the genome of
Drosophila melanogaster: the Adh region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Celliker S.E., Agbayani A., Arcaina T.T., Baxter E., Blazej R.G., Butenhoff C., Champe M., Chavez C., Chew M., Clesiolka L., Doyle C.M. Farfan D.E., Galle R., George R.A., Harris N.L., Hoskins R.A., Lewis S., Li P., Lomotan M.A., Mazda P., Moshrefi A.R., Moshrefi M., Nixon K., Pacleb J.M., Park S., Pfeiffer B., Poon L., Sequeira A., Sethi H., Snir E., Svirskas R.R., Wan K.H., Weinburg T., Zhang R., Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Champe M., Brokstein P., Hong L., Agbayani A., Carlson J., Champe M., Chavez C., Dorsett V., Farfan D., Frise E., George R., Gonzilez M., Guarin H., Li P., Liao G., Miranda A., Mungall C.J., Nunco J., Pacleb J., Paragas V., Park S., Phouanenavong S., Wan K., Yu C., Lewis S.E., Rubin G.M., Celniker S., Phouanenavong S., Wan K., EMBL, AG03561; ARF35371; -.

EMBL, AG00361; AAF53571; -.

EMBL, AG00361; AAF45018.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5; Length 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENDERSE; FBSG0120414; Idqf3.
InterPro: IPR001223; Glyco_hydro_18.
Pfam: PF00704; Glyco_hydro_18; 1.
ProDom; PD00041; Glyco_hydro_18; 1.
SEQUENCE 441 AA; 49254 WW; F1938469FA117755 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      835 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.4%; Score 55.5;
48.3%; Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210 LLLSLTV-LPNVNSSWYYDAPSLAF 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 LLLSLTLSLVLLGSSWGCGVPAITPALSY 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-0CT-2001 (TrEMBLrel. 18, Created)
01-0CT-2001 (TrEMBLrel. 18, Last sequ
01-0CT-2001 (TrEMBLrel. 18, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AY047561; AAK77293.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genetics 153:179-219(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 48.3
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
```

```
DE Hypothetical protein SSO1079.

(N SSO1079.

Sulfolobus solfataricus.

C Archaea; Cremarchaeota; Thermoprotei; Sulfolobales; Sulfolobaceae;

C Sulfolobus.

(N SULTAXID-2287;

RN 11

RP SEQUENCE FROM N.A.

RR SEQUENCE FROM N.A.

RA AMAYEZ M.J. CHAN-MECHET C.C.*T. Clausen I.G., Cuttis B.A.,

RA AMAYEZ M.J. CHAN-MECHET C.C.*T. Clausen I.G., Cuttis B.A.,

RA HARAMP-de Jong I., Jeffries A.C., Kozera C.J., Medina N., Peng X.,

RA HARAMP-de Jong II., Jeffries A.C., Kozera C.J., Medina N., Peng X.,

RA HARAMP-de Jong II., Jeffries A.C., Kozera C.J., Medina N., Peng X.,

RA THI-NGOG H.F., Redder P., Schenk M.E., Theriauli C., Tolstrup N.,

RA Gratet R.A., Ragam M.A., Sansen C.W., Van der Oost J.;

RY Proc. Natl. Acad. Sci. U.S.A. 98:7835-7840(2001).

BR EMBL, AEOGETS, ARAKI341.I. -

COMPLET ACOMPLE GROWN OF A.B. Pred.

SEQUENCE 835 AA; 92357 WW; BD28B5418BAF7250 CRC64;

Query Match

Best Local Shillarity 44.8%; Pred. No. 40.

HALLSLTLEILPINVSQSTVVISSWGGGVP 22

IIIIIII :: ::IIII | III :: :: IIIII | III :: :: IIIII | III :: :: IIII | III |

D 9 LLLLSLTLEIPVNSQSTVVISSWGGGVP 37

Search completed: December 20, 2002, 15:18:56

Job time: 6.08696 secs
```

المعتقد فعالمها والخ

```
GenCore version 5.1.3

Copyright (c) 1993 - 2002 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 20, 2002, 15:12:58; Search time 1.13043 Seconds

(without alignments)

1210.790 Million cell updates/sec
```

Title: US-09-856-319B-4_COPY_1_33
Perfect score: 166
Sequence: 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

		Description	P40313 homo sapien	PO4813 canis famil	P17538 homo sapien	rattu	Q96kk4 homo sapien	P49772 mus musculu	Q48465 klebsiella			P57764 homo sapien	P21844 mus musculu	P00164 trypanosoma			_	Q00652 solanum tub	Q10644 mycobacteri			homo	Q9ulz9 homo sapien			P47796 gadus morhu	_	P36142 saccharomyc	-			Q9pjt1 chlamydia m		Q56066 salmonella	Q8tmt1 methanosarc
SUMMAKIES		ΠD	CTRL_HUMAN	CTR2_CANFA	CTRB_HUMAN	CTRB_RAT	OAC1_HUMAN	FL3L_MOUSE	MTGA_KLEPN	CLCR_HUMAN	ISPD_CHLTR	DF5L_HUMAN	MCT5_MOUSE	CYB_TRYBB	KM65_YEAST	US10_HSV11	VTU3_DROME	CPI9_SOLTU	YD33_MYCTU	MALX_KLEPN	PIP_SULSO	GT10_HUMAN ·	MM17_HUMAN	CTRA_BOVIN	CTRB_BOVIN	CTRA_GADMO	YG78_PSEAE	YK31_YEAST	DMWD_MOUSE	YQGA_BACSU	PAEP_HUMAN	ISPD_CHLMU	NU3M_STRCA	MOEA_SALTY	DNLI_METAC
		8	Н	-	-1	-		-	-	-	7	٦	П	П	7	÷	٦	-	7	-	П	-	-	-	-	-	-	-	Н.	-	П	7	-	<b>.</b>	-
	•	Length	264	263	263	263	312	232	242	268	219	484	247	363	742	312	119	222	344	65	310	541	909	245	245	263	304	418	650	142	180	218	116	413	268
æ		Match			٠.	٠.	34.9	33.1	33.1	33.1	31.3	30.7	30.1	30.1				29.5	29.5	29.5	29.5	29.5					28.9	œ ·	•	ω.	28.6	ω.	28.3	28.3	28.3
	į	Score	150	16	73	67	28	55	55	55	52	51	20	20	S	49.5	49	49	49	٠ ش	48.5	œ.		48	48	48	48	48	48		ζ.	٠	47	47	4/
	Result	Q	1	7	m	ಶ	S	9	7	œ	σ,	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	58	53	30	31	32	33

P45582 asparagus o	P26847 marchantia	P24144 rhizobium l	O63850 sarcophyton	P20347 solanum tub	P24995 pisaster oc
Q9um73 homo sapien	P01150 rattus norv	Q29461 bos taurus	O24384 solanum tub	P55091 rattus norv	P97473 mus musculu
BGAL_ASPOF	NU3M_MARPO	NODJ_RHILT	NU3M_SARGL	CPI1_SOLTU	NU1M_PISOC
ALK_HUMAN	THYL_RAT	EL2_BOVIN	CP18_SOLTU	CLCR_RAT	TRBP_MOUSE
	пп				
832	118	262	$\frac{117}{221}$	222	324
1620	255	269		268	365
28.3	28.0 28.0	28.0 28.0	27.7 27.7	27.7 27.7	27.7
47	46.5	46.5	4 4	46	46
	46.5	46.5	6 6	46	46
34 35	36 37	8 6 8 8	<b>4</b> 0	42	44

# ALIGNMENTS

```
CTRB_HUMAN
  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                                                                                                                        RESULT 3
CTRB_HUMAN
                                                        ó
                                                                                 pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                   ó
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      c. Natl. Acad. Sci. U.S.A. 80:7486-7490(1983).
CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa,
                                                                                                                                                                                                                13-A0G-1987 (Rel. 05, Created)
13-A0G-1987 (Rel. 05, Last sequence update)
15-A0N-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen 2 precursor (EC 3.4.21.1).
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                                                                                                                                                                                                                     MEDLINE-84170253; PubMed-6584866; Minsky S.D., Laforge K.S., Luc V., Scheele G.; Identification of cDNA clones encoding secretory isoenzyme forms: sequence determination of canine pancreatic prechymotrypsinogen 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A21195; A21195.

MENOPES; A01766; LACB.

MEROPS; SOU1.152.

InterPro; IPR01124; Chymotrypsin.

InterPro; IPR001254; Ser_protease_Try.

InterPro; IPR001254; Ser_protease_Try.

PRINTS; PR00722; CHYMOTRYPSIN.

SMART; SM00020; Tryp_SPC; 1.

PROSITE; PS00134; TRYPSIN_DOM; 1.

PROSITE; PS00134; TRYPSIN_SER; 1.

PROSITE; PS00135; TRYPSIN_SER; 1.

Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                   ;
0
                                        Length 264;
                                                                   1; Indels
            3F629F02FA6DDFB4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2A2F449D813B3961 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHYMOTRYPSIN 2, A CHAIN. CHYMOTRYPSIN 2, B CHAIN. CHYMOTRYPSIN 2, C CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHYMOTRYPSINGEN 2.
                                       Score 150; DB 1;
Pred. No. 2.5e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phe-i-Xaa, Leu-i-Xaa.
-:- SUBCELLULAR LOCATION: EXTRACELLULAR.
-:- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHYMOTRYPSIN 2,
CHARGE RELAY SY
                                                                                                                                                                                          263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY. SIMILARITY.
 BY SIMILARITY
                                                                  3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY
                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNOR 33
                                                                                                                                                                                         PRT;
            28002 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MM;
                                       90.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; K01173; AAA30841.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27787
                                                                                                                                                                                          STANDARD;
                                                                  29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           263
75
120
213
140
76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31
164
            264 AA;
                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263 AA;
                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9615;
                                                                                                                                                                                        CTR2_CANFA
P04813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
 DISULFID
            SEQUENCE
                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACT,
                                                      Best
                                                                                                                                                                 RESULT
                                                                                                                       qq
F S
                                                                                              ò
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                               ö
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg R.; Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
PRIMIS; PR007022; CHYMOTRPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY). SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tomita N., Izumoto Y., Horii A., Doi S., Yokouchi H., Ogawa M., Mori T., Matsubara K.; "Molecular cloning and nucleotide sequence of human pancreatic prechymotrypsinogen cDNA.";
                                                               ;
45.8%; Score 76; DB 1; Length 263; 55.2%; Pred. No. 0.0085;
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAY SYSTEM (BY SYCHARGE RELAY SYSTEM (BY SYCHARGE RELAY SYSTEM (BY SYCHARGE RELAY SYSTEM (BY                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochem. Biophys. Res. Commun. 158:569-575(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHYMOTRYPSINGEN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                 01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last Sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-CAPPAINOGEN B precursor (EC 3.4.21.1).
CTRB1 OR CTRB.
                                                                                                                                                                                                                                                                                                                              263 AA.
                                                               3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Pancreas;
MEDLINE=89134264; PubMed=2917002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; BC005385; AAH05385.1;
PIR; A31299; A31299.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M24400; AAA52128.1;
                           Best Local Similarity 55.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genew, HGNC:2521; CTRB1.
MIM; 118890; -.
                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31
164
263
75
120
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS; S01.152; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACT_SITE
ACT_SITE
```

ö

Gaps

ö

Indels

5; Mismatches

Score 67; DB 1; Length 263; Pred. No. 0.12;

ACAFDBACF8C4DA6D CRC64;

BY SIMILARITY. BY SIMILARITY.

Section .

```
1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                             27849 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 LLLSLTLSLVLLGSSWGCGV 21
                                                                                     40.48;
                                                                                                     44.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Conservative
                                                                                                                        13; Conservative
                                                                                                                                                                                                                                                                                      STANDARD;
                                               263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  312 AA;
                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                    OAC1_HUMAN
Q96KK4;
           DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                   OR10C1
                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                        DDT TO THE FETT THE F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
               FT
                                                                                                                                                            ò
                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Isolation and sequence of a rat chymotrypsin B gene.";
J. Biol. Chem. 259:14265-14270(1984).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHYMOTRYPSINOGEN B.
CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS500134; TRYPSIN_LOM; 1.
PROSITE; PS00135; TRYPSIN_LS; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDILNE-88054881: PubMed-6209274;
Bell G.I., Quinto C., Quiroga M., Valenzuela P., Craik C.S.,
Rutter W.J.;
                                                                                                                                   Score 73; DB 1; Length 263;
Pred. No. 0.021;
3; Mismatches 10; Indels
         BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
4CICO55A490B8701 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                                                                                                                                                                                                                                                                                                                                                            01-APR-1988 (Rel. 07, Created)
01-APR-1988 (Rel. 07, Last sequence update)
101-ADN-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen B precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                           263 AA
                                                                                                                                                                         3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                 BY
BY
BY
BY
140
76
4 219
200
238
27870 MW;
                                                                                                                                   ch 44.0%;
1 Similarity 55.2%;
16; Conservative :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; K02298; AAA98732.1; -.
                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
                                                              186 2
209 2
263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P00766; 1CHG.
MEROPS; S01.152; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; A22658; KYRTB.
                                                                                                                                                      Best Local Similarity
Matches 16; Conserv
                          DISULFID
DISULFID
DISULFID
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACT_SITE
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                           CTRB_RAT
                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTRB1
                                                                                                                                                                                                                                                                                                     RESULT 4
CTRB_RAT
                                                                                                                                                                                                                                                                                                                                                             FFFF
                                                                                                                                                                                                              ô
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isp-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -LINKED (GLCNAC. . .) (POTENTIAL)
B6FD6E0E700CB2CC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 58; DB 1; Length 312;
Pred. No. 2.1;
2; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PSC0237; G_PROTEIN_RECEP_F1_1; 1.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
G-protein coupled receptor; Transmembrane; Glycoprotein; Multigene family; Olfaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 (POTENTIAL). CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
                                          15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Olfactory receptor 10c1 (Hs6M1-17).
312 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AL035542; CAB44507.1; ALT_INIT.
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34351 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34.9%;
60.0%;
```

```
EMBL;
                                                                                                                                                                       EMBL;
                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MTGA_KLEPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MTGA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=5JL/J;

WEDLINE-94064791; PubMed=7505204;

Lyman S.D., James L., Vandenbos T., Devries P., Brasel K.,

Lyman S.D., James L., Vandenbos T., Devries P., Brasel K.,

Glinlak B., Hollingsworth L.T., Picha K.S., McKenna H.J.,

Splett R.R., Fletcher F.A., Maraskovsky E., Farrah T.,

Foxworthe D., Williams D.E., Beckmann M.P.;

Molecular cloning of a ligand for the fl13/flk-2 tyrosine kinase

receptor: a proliferative factor for primitive hematopoietic cells.";

Cell 75:1157-1167(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Type I membrane protein. Two soluble isoforms are also produced by alternative splicing. One of which, isoform 3/E6, is biologically active, while the other, isoform 4/E6Deltal6, is inactive. ALTERNATIVE PRODUCTS: 4 isoforms; 1/6C (shown here), 2/5H, 3/E6 and 4/E6Deltal6; are produced by alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                McClanahan T., Culpepper J., Campbell D., Wagner J.,
Franz-Bacon K., Mattson J., Tsai S., Luh J., Guimares M.J.,
Matted M.-G., Rosnet O., Birnbaum D., Hannum C.;
Submitted (APR-1996) to the EMBL/Genbank/DDBJ databases.
-i- FUNCTION: STIMULAPES THE PROLIFERATION OF BARLY HEMATOPOIETIC
CELLS. SYNERGIZES WELL WITH A NUMBER OF OTHER COLONY STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Structural analysis of human and murine flt3 ligand genomic loci."; Oncogene 11:1165-1172(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the murine
                                                                                                                                                                                                                                                                              MEDLINE-94195428; PubMed-8145851;
Hannum C., Culpepper J., Campbell D., McClanahan T., Zurawski S.,
Bazan J.F., Kastelein R., Hudak S., Wagner J., Martison J., Luh J.,
Duda G., Martina N., Peterson D., Menon S., Shanafelt A.,
Muench M., Kelner G., Namikawa R., Rennick D., Roncarolo M.G.,
Zlotnik A., Rosnet O., Dubreuil P., Birnbaum D., Lee F.,
"Ligand for FIT3/FKLZ receptor tyrosine kinase regulates growth of
haematopoletic stem cells and is encoded by variant RNAS.";
                                                                                FL3L_MOUSE STANDARD; PRT; 232 AA.
P49772; 064085;
10-CGT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
SL cytokine precursor (Fms-related tyrosine kinase 3 ligand) (Flt3)
                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-96032581; PubMed-7566977;
Lyman S.D., Stocking K., Davison B., Fletcher F., Johnson L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Identification of soluble and membrane-bound isoforms of flt3 ligand generated by alternative splicing of mRNAs."; Oncogene 10:149-157(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ь.
Г
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBUNIT: Homodimer (soluble isoform) (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
MEDILINE-95124710; Pubmed-782487;
L., James L., Escobar S., Downey H., de Vries
Brasel K., Stocking K., Beckmann M.P., Copeland N.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
MEDLINE-96032581; PubMed-7566977;
           LLLSHRVCLQLAGSAWACGV 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FACTORS AND INTERLEUKINS.
                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                       ligand) (Flt3L).
FLT3LG OR FLT3L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cleveland L.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Escobar
                                                                      FL3L_MOUSE
           133
                                                       RESULT 6
           셤
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
SL CYTOKINE.
EXTRACELLULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N'LINKED (GLCNAC. . .) (POTENTIAL).
N'LINKED (GLCNAC. . .) (POTENTIAL).
N'LINKED (GLCNAC. . .) (POTENTIAL).
DSSTILLPPRSPIALEATELPEPRPRQLILLLILLLPLILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAAAWGLRWQRARRGELHPGVPLPSHP -> GNGGPRAQH
HGATRLTATALLTVCPGLLLPLVGTSHMFFLPYFLSFLSSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LKMYLYV (IN ISOFORM 2).
DSSTLL. -> GSHYAG (IN ISOFORM 3).
MISSING (IN ISOFORM 3).
VQCQP -> GLIMQARLTLNSKQSSCLSVLSAGIT (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   Cytokine; Glycoprotein; Transmembrane; Alternative splicing; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Spratt B.G., Zhou J., Taylor M., Merrick M.J.;
"Monofunctional biosynthetic peptidoglycan transglycosylases.";
Mol. Microbiol. 19:639-640(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Monofunctional biosypthetic peptidoglycan transglycosylase (EC 2.4.2..) (Monofunctional TGase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 232; 3.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A -> G (IN REF. 1).
MISSING (IN REF. 2).
3A3680D3CB69FBA6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISOFORM 4).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=M5al;
MEDLINE=96228711; PubMed=8830253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR004213; Flt3_lig.
Pfam; PF02947; flt3_lig; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26141 MW;
                                                                                                                                                                                                                                       L23636; AAA39436.1; -. U29875; AAA90951.1; -. U29875; AAA90952.1; -. S76459; AAB33069.1; -.
                                                                                                                                                               EMBL; U04807; AAA18000.1; -.
                                                                                                                                                                                                                                                                                                                         U44024; AAA93306.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33.1%;
61.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :||| | |:|||| ::||
193 LLLLLPLTLVLLAAAWG 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                     U44024; AAA93307.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169
232
163
                                                                                                                                                                                                                                                                                                                                            Flt31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klebsiella pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141
198
232 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        27
190
211
31
71
120
152
152
                                                                                                                                                                                                                                                                                                                                            MGD; MGI:95560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klebsiella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MTGA_KLEPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARSPLIC
VARSPLIC
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           048465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                    EMBL;
```

```
1
17
30
30
74
121
121
17
17
186
212
252
252
80
                                                                                                                                                                                                                                                                                                                                                      Polymorphism.
SIGNAL
                                                                                                                                                                                                                                    MIM; 601405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ISPD_CHLTR
                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             084468;
                                                                                                                                                                                                                                                                                                                                                                             PROPEP
                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISPD_CHLTR
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Caldecrin is a novel-type serine protease expressed in pancreas, but
its homologue, elastase IV, is an artifact during cloning derived
from caldecrin gene.";
J. Blochem. 123:546-554(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-96221265; Pubmed-8635596;
Tomomura A., Akiyama M., Itoh H., Yoshino I., Tomomura M., Nishii Y.,
Noikura T., Saheki T.;
                                                                                                                                                                                                                                                                                  Gaps
    PATHWAY: FINAL STAGES TO PEPTINGGLYCAN SYNTHESIS.
SUBCELLULAR LOCATION: Membrane-associated (Potential).
SIMILARITY: TO THE N-TERMINAL OF BACTERIAL CLASS IA PENICILLIN-BINDING PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHARACTERIZATION.
MEDLINE-98207038; Pubmed-9538241;
Yoshino-Yasuda I., Kobayashi K., Akiyama M., Itoh H., Tomomura A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                 Pfam: PF00112; TransglyGosyl; 1.
ProDom: PD001895; GT 51; 1.
Protom: Pp001895; GT 51; 1.
TRANSMEM 19 39
POTENTIAL.
SEQUENCE 242 AA; 27196 MW; Al2CAB4A33lAbA49 CRC64;
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sziegoleit A.;
"A human pancreatic chymotrypsin: biochemical and molecular
characterization.";
                                                                                                                                                                                                                                                        33.1%; Score 55; DB 1; Length 242; 58.8%; Pred. No. 4; 1.1ve 3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Molecular cloning and expression of human caldecrin."; FEBS Lett. 386:26-28(1996).
                                                                                                                                                                                                                                                                                                                                                                                    CLCR_HUMAN STANDARD, PRT; 268 AA. 999895; Q9NUH5; O00765; G9T-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Caldecrin precursor (RC 3.4.21.2) (Chymotrypsin C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A., AND VARIANT TRP-80.
TISSUE-Pancreas;
FUNCTION: CELL WALL FORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 17-268 FROM N.A
                                                                                                                                                                          InterPro; IPR001264; GT_51.
                                                                                                                                                                                                                                                                                                                     EMBL; Z54198; CAA90903.1;
                                                                                                                                                                                                                                                                                                        17 WGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                  Best Local Similarity 58.8
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTRC OR CLCR.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saheki T.;
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coville
                                                                                                                                                                                                                                                                                                                                                                           CLCR_HUMAN
                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                 RESULT
ò
                                                                                                                                                                                                                                                                                                                             g
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
2-C-methyl-D-erythritol 4-phosphate cytidylyltransferase (EC 2.7.7.60)
(4-diphosphocytidyl-2C-methyl-D-erythritol synthase) (MEP
cytidylyltransferase) (MCT).
Cytidylyltransferase) (MCT).
Chlamydia trachomatis.
Bacteria; Chlamydiales; Chlamydiaceae; Chlamydia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Tyr-|-Xaa,
               Phe-|-Xaa, Met-|-Xaa, Trp-|-Xaa, Gln-|-Xaa, Asn-|-Xaa.
-|- TISSUE SPECIFICITY: PANCREAS.
-|- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
N'LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hydrolase; Serine protease; Glycoprotein; Zymogen; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.1%; Score 55; DB 1; Length 268; 40.7%; Pred. No. 4.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                460BF33B4A96516F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTIVATION PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R -> W.
/FTId=VAR_010928.
S -> T /TM T-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -> T (IN REF. 1)
-> D (IN REF. 3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     219 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALDECRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                     EMBL; S82198; AAB47104.2; ALT_SEQ.
EMBL; AL031283; CAB77355.1; -
EMBL; Y13697; CAA74031.1; -
HASP; P00766; 1CHG.
MEROPS; S01.157; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29484 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew; HGNC:2523; CTRC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
```

Ĥ

Gaps

5

NAMES OF COLOR OF STATES O

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-92287966; PubMed-1376147;
Chu W., Johnson D.A., Musich P.R.;
"Molecular cloning and characterization of mouse mast cell chymases.";
Biochim. Biophys. Acta 1121:83-87(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MCNGIL H.P., Austen K.F., Somerville L.L., Gurish M.F., Stevens R.L., "Molecular cloning of the mouse mast cell protease-5 gene. A novel secretory granule protease expressed early in the differentiation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Huang R., Blom T., Hellman L.; "Cloning and structural analysis of MMCP-1, MMCP-4 and MMCP-5, three mouse mast cell-specific serine proteases."; Eur. J. Immunol. 21:1611-1621(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-92407343; PubMed-1527387; McNeil H.P., Frenkel D.P., Austen F., Friend D.S., Stevens R.L.; Translation and granule localization of mouse mast cell protease-5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Different mouse mast cell populations express various combinations of at least six distinct mast cell serine proteases."; Proc. Natl. Acad. Sci. U.S.A. 87:3230-3234(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-1991 (Rel. 18, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Mast cell protease 5 precursor (EC 3.4.21.-) (MMCP-5) (Mast cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 22-51.
MEDLINE-90222202; PubMed-2326280;
Reynolds D.S., Stevens R.L., Lane W.S., Carr M.H., Austen K.F.,
                                                                                                                                                                                                                                                                                                                                                                      30.7%; Score 51; DB 1; Length 484; 63.2%; Pred. No. 24; ive 2; Mismatches 3; Indels
Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: BELONGS TO THE DRNS FAMILY.
                                                                                                                                                                                                                                                                                                     EMBL; BC008904; AAH08904.1; -.
SEQUENCE 484 AA; 52801 MW; F7CE8073E0C0194D CRC64;
                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=Leaden X Al; TISSUE-Connective tissue; MEDLINE=91285010; PUMPG=2060576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Biol. Chem. 266:20316-20322(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-92041862; Pubmed-1939089;
                                                                                                                                                                                                                                                           EMBL; AK02212; BAB13986.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420 TMSLPPGLLGNSWGEGAPA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7 TLSLV--LLGSSWGCGVPA 23
                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 63.2
nes 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  serosal mast cells."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serafin W.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chymase 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MCT5_MOUSE
P21844;
                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MCT5_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45555555555558488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                                                                                            Chlamydia trachomatis.";
Science 282:754-759(1998).
-!- FUNCTION: CATALYZES THE FORMATION OF 4-DIPHOSPHOCYTIDYL-2C-METHYL-D-ERYTHRITOL FROM CTP AND 2C-METHYL-D-ERYTHRITOL 4-PHOSPHATE (BY
                                                                                                                             Stephens R.S., Kalman S., Lammel C.J., Fan J., Marathe R., Aravind L., Mitchell W.P., Olinger L., Tatusov R.L., Zhao Q., Koonin E.V.,
                                                                                                                                                                                                                                                                                                                                                  -1- CATALYTIC ACTIVITY: CTP + 2-C-methyl-D-erythritol 4-phosphate = diphosphate + 4-(cytidine 5-diphospho) -2-C-methyl-D-erythritol. -1- PATHWAY: Nonmewalonate terpenoid biosynthesis pathway; third step.-1- SIMILARITY: BELONGS TO THE ISPD FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

TISSUB-Mammary gland;

TISSUB-Mammary gland;

TISSUB-Mammary gland;

TISSUB-Mammary gland;

TISSUB-Mammary gland;

Nishikawa T., Nagai, K., Sugano S., Shiratori A., Sudo H.,

Wagatsuma M., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M.,

Takahashi M., Chiba Y., Ishida S., Murakawa K., Ono Y., Takiguchi S.,

Watanabe S., Kimura K., Murakami K., Ishii S., Kawai Y., Takiguchi S.,

Yamamoto J., Wakamatsu A., Nakamura Y., Nagahari K., Masuho Y.,

NINOMIYA K., Itayanagi T.;

"NEDO human cDNA sequencing project.";

Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia; Eutheria; Primates; Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                       "Genome sequence of an obligate intracellular pathogen of humans:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transferase; Nucleotidyltransferase; Isoprene biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ch 31.3%; Score 52; DB 1; Length 219; 1 Similarity 36.4%; Pred. No. 8.8; 16; Conservative 3; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            219 AA; 24168 MW; 45C69BF82505364D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 LSLTLSLVLLGSSWG------CGVPAITPALSYNQR 33'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-ocr-2001 (Rel. 40, Created)
16-ocr-2001 (Rel. 40, Last sequence update)
15-UNY-2002 (Rel. 41, Last annotation update)
DFNS-like protein FLJ12150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR001228; ISPD_synthase.
                                                                           STRAIN=D/UW-3/Cx;
MEDLINE-99000809; PubMed-9784136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AE001320; AAC68062.1; -. HSSP; Q46893; 11NJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF01128; IspD; 1.
PROSITE; PS01295; ISPD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete proteome. SEQUENCE 219 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                               [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                  SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
     NCBI_TaxID=813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Lymph;
Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DF5L_HUMAN
P57764;
                                                                                                                                                                               Davis R.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DF5L_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
```

RESULT 10

a ò

The second second

```
KM65_YEAST
Q03656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KM65_YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
      RRTH REST NOT THE PRICE OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                  J. Immunol. 149:2466-2472(1992).
-!- SUBCELLULAR LOCATION: Secretory granules.
-!- TISSUE SPECIFICITY: MAST CELLS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. GRANZYME SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. .) (POTENTIAL).
T -> A (IN REF. 1).
C -> R (IN REF. 4).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 50; DB 1; Length 247;
Pred. No. 18;
5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glycoprotein; Zymogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24C290CF61237DC7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Benne R., de Vries B.F., van den Burg J., Klaver B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIVATION PEPTIDE. MAST CELL PROTEASE
Immunodetection with specific antipeptide Ig.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCG-----VPAITPALSY 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MHLLTLHLLLLLGSSTKAGEIIGGTECIPHSRPYMAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IN REF
                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:96941; Mcpt5.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfan; PF00089; trypain; l.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; l.
PROSITE; PS50240; TRYPSIN_DOM; l.
PROSITE; PS00114; TRYPSIN_LN; l.
PROSITE; PS001135; TRYPSIN_HIS; l.
Hydrolase; Serine protease; Signal; Glyco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL
                                                                                                                                                                                                                                                                            EMBL; X68805; CAA48705.1; ALT_INIT.
EMBL; M73759; AAA40105.1; -.
EMBL, M73760; -; NOT_ANNOTATED_CDS.
EMBL; M68898; AAA39492.1; -.
PIR; A41076; A41076.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٨
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (KINETOPLAST).
MEDLINE-84041494; Pubmed-6314266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27586 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 30.1%;
Best Local Similarity 39.5%;
Matches 15; Conservative 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trypanosoma brucei brucei.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P23946; 1KLT.
MEROPS; S01.150; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=5702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytochrome B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COB OR CYTB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYB_TRYBB
P00164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
CYB_TRYBB
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                         COUPLED TO ATP SYNTHESIS.

-!- COFACTOR: TWO HEME GROUPS (B562 AND B566) WHICH ARE NOT COVALENTLY BOUND TO THE PROTEIN.

-!- SUBBUILT: THE MAIN SUBBUILS OF COMPLEX B-C1 ARE: CYTOCHROME B, CYTOCHROME C1 AND THE RIESKE PROTEIN.

-!- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000179; Cyt_b_b6.
InterPro; IPR001230; Prenyl_site.
Pfam: PF000132; cytochrome_b_C; I.
Pfam; PF00033; cytochrome_b_N; I.
PROSTER; PS00192; CYTOCHROME_B_HEME; I.
PROSTER; PS00193; CYTOCHROME_B_D(D; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
"The nucleotide sequence of a segment of Trypanosoma brucei mitochondrial maxi-circle DNA that contains the gene for apocytochrome b and some unusul unassigned reading frames."; Nucleic Acids Res. 11:6925-6941(1983).
-!- FUNKTION: COMPONENT OF THE UBIGGINOL-CYTOCHROME C REDUCTASE COMPLEX (COMPLEX LII ON CYTOCHROME B-C1 COMPLEX), WHICH IS A RESPIRATORY CHAIN THAT GENERATES AN ELECTROCHEMICAL POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUN-1995) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES.
SIMILAR TO S.POMBE DSK1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saccharomyces cerevisiae (Baker's yeast).
Eukaryota, Fungi, Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Probable serine/threonine-protein kinase YMR216C (EC 2.7.1.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-S288c / AB972;
Dedman K., Brown D., Bowman S., Barrell B.G., Rajandream M.A.,
Walsh S.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRON 1 (HEME B562 AXIAL LIGAND).
IRON 2 (HEME B566 AXIAL LIGAND).
IRON 2 (HEME B562 AXIAL LIGAND).
IRON 1 (HEME B566 AXIAL LIGAND).
2A37CD827E55923B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30.1%; Score 50; DB 1; Length 363; 46.4%; Pred. No. 25; tive 3; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       742 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 LLSLTLSLVLLGSSWGCGVPAITPALSY 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43455 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X00017; CAA24915.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74
88
175
189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YMR216C OR YM8261.10C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
nes 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; A00160; CBUTB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heme; Kinetoplast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-4932;
```

```
PIR; A05242; QQBE07
                                                                                                                                                                                                                                VTU3_DROME
                                                                       SEQUENCE
                                                                                                Query Match
                                                             ZN_FING
                                                                                                            Best Local
Matches
                                                                                                                                                                                                        RESULT 15
VTU3_DROME
                                                                                                                                                                    셤
  ð
                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                              ô
  and for commercial
            requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RIXON F.J., McGeoch D.J.;
"A 3' co-terminal family of mRNAs from the herpes simplex virus type
1 short region: two overlapping reading frames encode unrelated
polypeptide one of which has highly reiterated amino acid sequence.";
Nucleic Acids Res. 12:2473-2487(1984).
-! SIMILARITY: BELONGS TO A FAMILY THAT GROUP TOGETHER HSV-1 US10,
EHV-1 66, EHV-4 ORF3, AND VZV 64/69.
                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                        Hypothetical protein; Transferase; Serine/threonine-protein kinase; ATP-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=85160822; PubMed=2984429;
McGeoch D.J., Dolan A., Donald S., Rixon F.J.;
Sequence determination and genetic content of the short unique region in the genome of herpes simplex virus type 1.";
J. Mol. Biol. 181:1-13(1985).
                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                     30.1%; Score 50; DB 1; Length 742; 80.0%; Pred. No. 49;
                                                                                                                                                                                                                                                                              1; Indels
  Usage by
                                                                                                                                                                                                                  BY SIMILARITY.
C775F10B30C950FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Herpes simplex virus (type 1 / strain 17).
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Alphaherpesvirinae; Simplexvirus.
                                                                                                                                                                                          ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
01-APR-1993 (Rel. 25, Last annotation update)
modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                       312 AA.
                                                                                                                                                                                 PROTEIN KINASE
                                                      SGD; S0004829; YMR216C.
InterPro; IPR000719; Buk_pkinase.
InterPro; IPR0002190; Ser_thr_pkinase.
Pfan; PP00069; pkinase; 1.
ProDom; PD000001; Euk_pkinase; 2.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
                                                                                                                                                                                                                                                                              1; Mismatches
                        send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=84169548; PubMed=6324121;
                                                                                                                                                                                                                               83237 MW;
                                              EMBL; Z49809; CAA89931.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X14112; CAA32275.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X02138; CAA26064.2; -. EMBL; X00428; CAA25126.1; -. EMBL; L00036; AAA96678.1; -.
                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Virion protein US10.
                                                                                                                                                                              158 7
164 1
187 1
294 2
742 AA;
                                                                                                                                                                                                                                                                                                                 1111: 1111
575 VLLGAPWGCG 584
                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                     11 VLLGSSWGCG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X02138;
EMBL; X00428;
                                                                                                                                                                                                                                                                             .;
8
                                                                                                                                                                                                                                                                                                                                                                                      US10_HSV11
                                                                                                                                                                                                                  ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                           NP_BIND
BINDING
                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                  P06486
                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US10.
                                                                                                                                                                                                                                                                                                                           рp
 ò
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the SWISS Institute of Bioinformatics and the EMBL outstation. The Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Comparative analysis of the sequence and structure of two Drosophila melanogaster genes encoding vitelline membrane proteins."; Gene 136:121-127(1993).
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;
Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scherer L.J., Harris D.H., Petri W.H.;

"Drosophila vitelline membrane genes contain a 114 base pair region
"Drosophila vitelline membrane genes contain a 114 base pair region
of highly conserved coding sequence.";
Dev. Biol. 130:786-788(1988).
-!- FUNCTION: MAJONE EARLY EGGSHELL PROTEIN.
-!- FUNCTION: MAJONE EARLY EGGSHELL CELLS.
-!- TISSUE SPECIFICITY: FOLLICLE CELLS.
-!- DEVELOPMENTAL STAGE: EXPRESSED DURING VITELLINE MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SIMILARITY: A 38 AMINO ACIDS REGION (VM DOMAIN) IS CONSERVED IN DROSOPHILA VITELLINE MEMBRANE PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Isolation and chromosomal location of putative vitelline membrane genes in Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-Daekwanryeong;
MEDLINE-85257433; PubMed-3926479;
Mindrinos M.N., Scherer L.J., Garcini F.J., Kwan H., Jacobs K.A.,
                                                                                                                                                                                                                                                          DB 1; Length 312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scherer L.J., Harris D.H., White M.K., Steel L.S., Jin J.,
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                   POTENTIAL.
12D01B0E7C920EA3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Vitelline membrane protein VM34Ca precursor.
VM34CA OR VM34C.1.
                                                                                                                                                                                                                                                   Match 29.8%; Score 49.5; Incal Similarity 54.5%; Pred. No. 26; Pred. 12; Conservative 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94123988; PubMed=8293994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Oregon-R;
MEDLINE=89065296; PubMed=3143615;
                                                                                                                                                                                                                                                                                                                                                                                                                                   291 THCLHLFG-AFGCGDPALTPPL 311
InterPro; IPR0000087; Collagen.
InterPro; IPR000014; EHV_Unk.
Pfam; PF02053; Gene66; 1.
                                                                                                                                                                                                                                                                                                                                                                                            7 TLSLVLLGSSWGCGVPAITPAL 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Rel. 34, Created)
                                                                                                                                                          293 P
34055 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; L08852; AAC37200.1; -. EMBL; X01802; CAA25933.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 69-106 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-96 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBO J. 4:147-153(1985).
                                                                                                                                                   271
312 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-1996 (Rel.
01-OCT-1996 (Rel.
15-JUL-1999 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BIOSYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID-7227;
```

```
DR EMBL; M22700; AAA29018.1; -.

DR FlyBase; FBG10003983; vm34Ca.

KW Signal; Structural protein; Eggshell.

FT SIGNAL

T ODMAIN

FT CHAIN

FT CONFLICT

SO SEQUENCE 119 AA; 11934 MW; 2F06298E52005BFC CRC64;

Query Match

Best Local Similarity 54.5%; Pred. No. 12;

Matches 12; Conservative 3; Mismatches 5; Indels 2; Gaps

Qy 12 LLGSSW--GCGVPAITPALSYN 31

SEBATCH COMPLETED:

Db 25 MLGSSWGGKGKPAAAPAPSYS 46

Search completed: December 20, 2002, 15:17:14

Job time: 2.13043 secs
```

1;

ı					
	•				
					-
7					•

```
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
```

model	
30	
using	
search,	
protein	
•	
protein	
ŏ	

	(without alignments)	530.147 Million cell updates/sec
2002,		
20,		
December 20, 2002, 15:16:49		
Run on:		

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

# Database :

Published_Applications_AA:*

# 1: /cgn2_6/ptcdata/1/pubpaa/USOB_NEW_PUB.pep:* 2: /cgn2_6/ptcdata/1/pubpaa/USOB_NEW_PUB.pep:* 3: /cgn2_6/ptcdata/1/pubpaa/USOB_NEW_PUB.pep:* 4: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 5: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 6: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 7: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 8: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 9: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 10: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 11: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 12: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 13: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:* 14: /cgn2_6/ptcdata/1/pubpaa/USOB_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

	Description	Sequence 529, App		Sequence 1, Appli		Sequence 1, Appli	Sequence 81, Appl	Sequence 152, App	Sequence 695, App	Sequence 1, Appli	Sequence 2, Appli		-		_	Sequence 1017, Ap	Sequence 16, Appl		Sequence 103, App	Sequence 4, Appli
CHILD	ID	US-09-925-297-529	US-09-888-615-96	US-09-335-325-1	US-09-788-142-1	US-09-761-120-1	US-09-873-676-81	US-09-923-779-152	US-09-925-297-695	US-09-967-386-1	US-09-946-893-2	US-09-978-295A-69	US-09-978-697-69	US-09-978-192A-69	US-10-052-586-64	US-09-925-301-1017	US-09-804-156-16	US-09-946-633-8	US-09-888-615-103	US-09-961-721-4
	DB	10	10	σ	10	10	10	10	10	σ	10	σ.	σ	6	12	10	10	10	10	σ
	Query Match Length DB	192	263	812	812	812	812	270	273	791	810	453	453	453	453	248	327	327	454	251
æ	Query Match	62.7	58.0	34.2	34.2	34.2	34.2	34.2	34.2	34.1	34.1	33.0	33.0	33.0	33.0	33.0	33:0	33.0	33.0	32.8
	Score	889	822.5	485.5	485.5	485.5	485.5	484.5	484.5	484	484	468.5	468.5	468.5	468.5	468	468	468	468	464.5
	Result No.	-	7	m	❖	S	9	7	89	6	10	11	12	13	14	15	16	17	18	19

AAA	Sequence 126, App. Sequence 126, App. Sequence 934, App. Sequence 934, App. Sequence 934, App.	Sequence 934, App Sequence 932, App Sequence 932, App Sequence 932, App Sequence 932, App	Sequence 895, App Sequence 895, App Sequence 895, App Sequence 14, Appl Sequence 895, App Sequence 23, Appl	Sequence 101, App Sequence 90, Appl Sequence 7, Appl1 Sequence 7, Appl1 Sequence 7, Appl1 Sequence 1, Appl1
10 US-09-948-094-2 9 US-09-961-721-5 9 US-09-961-721-6 9 US-10-045-367A-5	10 US-09-910-151-6 9 US-09-870-759-126 9 US-10-012-896-934 10 US-09-789-143-934		<b>D D</b>	10 US-09-888-615-101 10 US-09-888-615-90 12 US-10-041-400A-7 12 US-10-041-264A-7 12 US-10-042-091A-7 10 US-09-988-975A-1
343 226 226	226 1169 393 393	4 4 4 4 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	490 490 380 490 490	970 320 284 284 284 283
32.6 32.3 31.3	31.0 31.0 31.0	31.0 31.0 31.0	00000000000000000000000000000000000000	30.7 30.6 30.4 30.4 30.4
462.5 443.5 443.5	44 440 6440 7.0440 7.0440	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	438 438 438 438	435.5 434.5 431.5 431.5 431.5
20 22 23 23	22222 2222 2425 243	33 33 33 33	34 33 34 35 36 37	4 4 4 4 4 4 4 5 10 10 10 10 10 10 10 10 10 10 10 10 10

### ALIGNMENTS

						odies															62 78. Score 888. DB 10. Length 102.
						TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies															<u>آ</u>
						s and															L ad
						rotein		5,297		5989											. 6
		325297				lds, P		109/92	9	0/0050		24,270									Soore
		60/sn				ic Ac		R: US,	1-08-	PCT/I	3-08	60/1;	3-12		0.						78.
		ation	1659A1		al.	Nucle	05	NUMBE	200	UMBER:	2000-0	UMBER:	1999-0	S: 928	Ver. 2				iens		62
	_	Applic	02008	ATION:	sen et	TION:	3: PA1	CATION	3 DATE	N NOI	DATE:	LION N	DATE:	ID NO	entin				no sap	•	
	97-529	529, 1	. 0520	NFORM?	T: Ros	INVE	ERENCE	APPLIC	FILING	PLICAT	LING I	PLICAT	LING	F SEO	: Pate	529	192	RT	M: Hon	97-525	Ę
T 1	US-09-925-297-529	Sequence 529, Application US/09925297	Patent No. US20020081659A1	GENERAL INFORMATION:	APPLICANT: Rosen et al.	TLE OF	FILE REFERENCE: PA105	CURRENT APPLICATION NUMBER: US/09/925,297	CURRENT FILING DATE: 2001-08-10	PRIOR APPLICATION NUMBER: PCT/US00/05989	PRIOR FILING DATE: 2000-03-08	PRIOR APPLICATION NUMBER: 60/124,270	PRIOR FILING DATE: 1999-03-12	NUMBER OF SEQ ID NOS: 928	SOFTWARE: Patentin Ver. 2.0	SEQ ID NO 529	LENGTH: 192	TYPE: PRT	ORGANISM: Homo sapiens	US-09-925-297-529	Ollery Match
RESULT 1	0S-09	; Seg	; Pat	; GEN	; AP	: TI	; FI	co :	CG	; PR	; PR	; PR	; PR	NO.	so:	; SEQ	,	ı.	0	60-sn	Ģ

Gaps ö Length 192; Indels ducry Match 62.7%; score 889; DB 10;
Best Local Similarity 84.7%; Pred. No. 1e-71;
Matches 160; Conservative 19; Mismatches 10;

ö

124	120	184	180
65 ISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTL 124	61 ISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTL 120	125 LKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTV 184	121 LKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTV 180
65	61	125	121
οy	q	οy	qq

181 NQCRQYWGS 189 185 NQCROYWGA 193 ò g

US-09-856-319B-4
1418
1 MLLISLTLSLVLLGSSWGCG......AMYTRVSKFSTWINQVMAYN 264 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

¹⁰⁶⁶⁵⁷ seqs, 16763532 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

```
557 IPLCASASSFECGKPQVEPK-KCPGRVVGGCVANPHSWPWQISLRTRFTGQHFCGGTLIA 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 PNWVVTAAHC---QVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124 LLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVT 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184 VNQCR--QYWGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNC 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 LSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLIS 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 17; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09788142
Patent No. US20010029246A1
GENERAL INFORMATION: A. Judah
APPLICANT: Folkman, M. Judah
O'Reilly, Michael
TITLE OF INVENTION: Angiostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 812;
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 34.2%; Score 485.5; DB 9; Best Local Similarity 40.0%; Pred. No. 2.9e-35; Matches 106; Conservative 35; Mismatches 107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 191 Peachtree Street, 37th Floor CITY: Atlanta
                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/612,788
FILING DATE: CUDKNOWN-
ATTORNEY/AGENT INFORMATION:
NAME: WATTEN, William L.
REGISTRATION NUMBER: 36,714
REFERENCE/DOCKET NUMBER: 05213-0126
                                       APPLICATION NUMBER: US/09/335,325 FILING DATE: 17-Jun-1999 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLONE: Plasminogen
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones & Askew, LLP
                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240 NIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       788 RPNKPGVYVRVSRFVDWIEREMRNN 812
                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: <Unknown>
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANTI-SENSE: NO FRAGMENT TYPE: N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Murine
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Georgia
COUNTRY: USA
ZIP: 30303-1769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
US-09-788-142-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-335-325-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180 LLSNAECKKSWGRRITDVMICAGASGVSSCMGDSGGPLVCQKDGAWTLVGIVSWGSRTCS 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGCPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MILLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O'Reilly, Micheal
Cao, Yihai
Sim, B. Kim Lee
TITLE OF INVENTION: Anglostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,1e-65;
nes 73; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Jones & Askew STREET: 191 Peachtree Street, 37th Floor CITY: Atlanta STATE: Georgia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Pred. No. 1.1e
39; Mismatches
                                                                                                                                          APPLICANT: WHYTE, DAVID
APPLICANT: WHYTE, DAVID
APPLICANT: CARNEPEEL, SEAN
APPLICANT: CARNEPEEL, SEAN
APPLICANT: CARNEPEEL, SEAN
APPLICANT: WANNING, GERRED
APPLICANT: SUDARSANAM, SUCHA
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: US/09/88,615
CURRENT FILING DATE: 2001-06-26
PRIOR FILING DATE: 2000-06-26
NUMBER OF SEQ ID NOS: 150
SOFTWARE: PATENTIN VET: 2.1
SED ID NO 96
LENGTH: 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 822.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                            Sequence 96, Application US/09888615
Patent No. US20020064856A1
GENERAL INFORMATION:
APPLICANT: PLOWMAN, GREGORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240 TTTPAVYARVTKLIPWVQKILAAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09335325; Patent No. US20020164717A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 58.0%;
Best Local Similarity 57.2%;
Matches 151; Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
CORGANISM: Homo sapiens
US-09-888-615-96
                                         US-09-888-615-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-335-325-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
```

g

ð

셤

δ

g ò g ŏ g

ò

7;

΄.

```
Sequence 81, Application US/09873676

Patent No. US20020077289A1

GENERAL INFORMATION:
APPLICANT: MacDonald, Nicholas J.
APPLICANT: Sim, Kim L.
TITLE OF INVENTION: Anglostatin and Endostatin Binding Proteins and Methods of Use FILE REFERENCE: 05213-0378 (43170-259333)
CURRENT APPLICATION NUMBER: US/09/873,676
CURRENT FILING DATE: 2001-06-04

PRIOR APPLICATION NUMBER: US 60/209,065
PRIOR FILING DATE: 2001-06-02
PRIOR FILING DATE: 2001-06-02
PRIOR FILING DATE: 2001-06-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        557 IPLCASASSFECGKPQVEPK-KCPGRVVGGCVANPHSWPWQISLRTRFTGQHFCGGTLIA 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVT 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184 VNQCR--QYWGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNC 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               557 IPLCASASSFECGKPQVEPK-KCPGRVVGGCVANPHSWPWQISLRTRFTGQHFCGGTLIA 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PNWVVTAAHC---QVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      670 LLKLSRPATITDKVIPACLPSPNYMVADRFICYITGWGETQGTFGA--GRLKEAQLPVIE 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PNWVVTAAHC----QVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  8 LSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLIS 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 LSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLIS 66
                                                                                                                                                                                                                                                                                                                                                                                    17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17;
                                                                                                                                                                                                                                                                                                                                        Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 34.2%; Score 485.5; DB 10; Length 8 Best Local Similarity 40.0%; Pred. No. 2.9e-35; Matches 106; Conservative 35; Mismatches 107; Indels
                                                                                                                                                                                                                                                                                                                                   34.2%; Score 485.5; DB 10; Length 40.0%; Pred. No. 2.9e-35; tive 35; Mismatches 107; Indels
PRIOR FILING DATE: 1999-05-11
PRIOR APPLICATION NUMBER: 08/666,735
PRIOR FILING DATE: 1997-05-30
NUMBER OF SEQ ID NOS: 47
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 NIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature; OTHER INFORMATION: Plasminogen US-09-761-120-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 123
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 40.0%
Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Murinae gen. sp. US-09-873-676-81
                                                                                                                                                                                       ORGANISM: Murinae gen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-873-676-81
                                                                                                                                           LENGTH: 812
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                     SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: FOLKman, M. Judah
APPLICANT: FOLKman, M. Judah
TITLE OF INVENTION: Nucleic Acids Encoding Kringle 1-5 Region Fragments of Plasminoge
FILE REFERENCE: 05940-0151 (43171-252068)
CURRENT APPLICATION NUMBER: US/09/761,120
CURRENT FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: 09/309,821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 PNWVVTAAHC---QVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVT 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 670 LEKESRPATITDKVIPACLPSPNYMVADRTICYITGWGETQGTFGA--GREKEAQLPVIE 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 LSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDN-TGFHFCGGSLIS 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184 VNQCR--QYWGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35; Mismatches 107; Indels
                                    COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/788,142
FILING DATE: 16-Feb-2001
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                      PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/866,735
FILING DATE: CUNKNOWN:
ATTORNEY/AGENT INFORMATION:
NAME: Warren, William L.
REGISTATION NUMBER: 35,714
REFERENCE/DOCKET NUMBER: 05940-0129
TELECOMMUNICATION INFORMATION:
TELEFRAX: (404) 818-3700
TELEFRAX: (404) 818-3799
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34.2%; Score 485.5; DB 340.0%; Pred. No. 2.9e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLONE: Plasminogen
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | :| |||:| || : | | | RPNKPGVYVRVSRFVDWIEREMRNN 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240 NIQAPAMYTRVSKFSTWINQVMAYN 264
                          MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
US-09-761-120-1
Sequence 1, Application US/09761120
Patent No. US20020037847A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCE CHARACTERISTICS:
LENGTH: 812 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: <Unknown>
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FRAGMENT TYPE: N-terminal ORIGINAL SOURCE:
  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 40.09
Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-788-142-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            788
```

ò 8

g

g ò g ò Q

ð

7;

```
NAME/KEY: SITE
LOCATION: (28)
                                                                                                                                                                                                                            NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-967-386-1
                                SEQ ID NO 69!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                        NAME/KEY:
                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                        쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58 HFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        174 LQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSGASSCQGDSGGPLVC-QKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175 LQQARLPVVDYKHCSRWNWWGSTVKKTMVCAGGYIRSGCNGDSGGPLNCPTEDGGWQVHG 234
LLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVT 183
                               670 LLKLSRPATITDKVIPACLPSPNYMVADRTICYITGWGETQGTFGA--GRLKEAQLPVIE 727
                                                                   184 VNQCR--QYWGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNC 239
                                                                                       116 NTM--NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPAR 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies FILE REFENCE: PAID.
FULL REFENCE: PAID.
CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION UNMER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                          Sequence 152, Application US/09923779
Fatent No. US20020076721A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Pyle, Ruth A.
APPLICANT: Ralos, Michael D.
TITLE OF INVENTION: CMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CAN
FILE REFERENCE: 210121.553
CURRENT APPLICATION NUMBER: US/09/923,779
CURRENT FILING DATE: 2001-08-06
NUMBER OF SEQ ID NOS: 155
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .2e-36;
tes 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 9.2e; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235 VTSFVSGFGCNFIWKPTVFTRVSAFIDWIEETIA 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           231 IVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.2%; Score 484.5; 40.9%; Pred. No. 9.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 695, Application US/09925297 Patent No. US20020081659A1 GENERAL INFORMATION:
                                                                                                                                                              | :| |||:| || || RPNKPGVYVRVSRFVDWIEREMRNN 812
                                                                                                                                        240 NIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 112; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us-09-925-297-695
                                                                                                                                                                                                                                               US-09-923-779-152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-923-779-152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 152
LENGTH: 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                      728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
 ò
                                g
                                                                       ŏ
                                                                                                    g
                                                                                                                                        ò
                                                                                                                                                                         g
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION: (34)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-925-297-695
                                                                                                                                                                                                                                                                                                       LOCATION: (28)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                   Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58 HFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NTM--NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPAR 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSGASSCQGDSGGPLVC-QKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LQQARLPVVDYKHCSRWNWWGSTVKKTMVCAGGYIRSGCNGDSGGPLNCPTEDGGWQVHG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MILLSLTLSLVLLGSSWGCGVPAITPALSYNORIVNGENAVPGSWPWQVSLQ-DNTG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 MLRLLSSLLLVAVASGYG-----PPSSXXSSRVVXGEDAVPYSWPWQVSLQYEKSGSFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10; Length 273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 791;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/09967386
Patent No. US2002015992A1
GENERAL INFORMATION:
APPLICANT: Abbort Laboratories
APPLICANT: Henkin, Jack
APPLICANT: Davidson, Donald J.
TITLE OF INVENTION: FOR INIBITING ANGIOGENESIS
FILE REFERENCE: 6738.US.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 34.1%; Score 484; DB 9; Length 79 Best Local Similarity 41.2%; Pred. No. 3.8e-35; Matches 106; Conservative 31; Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42; Mismatches 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.2%; Score 484.5; DB 1
40.9%; Pred. No. 9.3e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            231 IVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/967,386 CURRENT FILING DATE: 2001-09-26 PRIOR APPLICATION NUMBER: US 60/236,550 PRIOR FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 791
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 928
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens
                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                          LOCATION: (27)
OTHER INFORMATION:
```

Desnoyers, Luc

```
APPLICANT:
APPLICANT:
                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                                                                                                              APPLICANT:
                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Cao, Yihai
TITLE OF INVENTION: Materials and methods relating to endothelial cell growth
TITLE OF INVENTION: Inhibitors
FILE REFERENCE: Mewburn
CURRENT APPLICATION NUMBER: US/99/946,893
CURRENT FILING DATE: 2001-09-05
PRIOR APPLICATION NUMBER: US 60/230,893
PRIOR FILING DATE: 2000-09-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
8
                                                                                               132 RYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY- 190
                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY- 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     545 SFDCGKPQVEPK-KCPGRVVGGCVAHPHSWPWQVSLRTRFGMHFCGGTLISPEWVLTAAH 603
                              76 C---QVTPGRHFVVLGEYDRSSNAEP-VQVLSIARAITHPNWNANTMNNDLTLLKLASPA 131
                                                              CLEKSPRPSSYKVILGAH-QEVNLEPHVQEIEVSRLFLEPT-----RKDIALLKLSSPA 656
                                                                                                                                                                                    C---QVTPGRHFVVLGEYDRSSNAEP-VQVLSIARAITHPNWNANTMNNDLTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAH 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18; Gaps
                                                                                                                                                            191 -WGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    191 -WGARITDAMICAG--GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 34.1%; Score 484; DB 10;
Best Local Similarity 41.2%; Pred. No. 3.9e-35;
Matches 106; Conservative 31; Mismatches 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 69, Application US/09978295A Patent No. US20020156006A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09946893
Patent No. US20020072494A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                              248 TRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baker Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, Davi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 11
SOFTWARE: Patentin Ver.
SEQ ID NO 2
LENGTH: 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-978-295A-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-946-893-2
                                                                                                                                                                                                                                                                                                                          US-09-946-893-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132
                                                              604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                              ò
                                                             a
                                                                                             ò
                                                                                                                            셤
                                                                                                                                                            ò
                                                                                                                                                                                         g
                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
### PERLICANT EBLON Dan
### PERLICANT EBRON DAN
### PERLICANT EBBON DAN
### PE
```

NUMBER: 6 1998-03- 1998-03- 1998-03- NUMBER: 6 1998-03- NUMBER: 6 1998-03- NUMBER: 6 1998-03- NUMBER: 6 1998-03- NUMBER: 6 1998-03- NUMBER: 6	4 - 0.0 8 0.3 3 4 - 0.0 8 0.3 4 - 0.0 8 0.3 3 4 - 0.0 8 0.3 3 4 - 0.0 8 0.3 5 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2 6 0.0 8 1.2	28. 28. 28. 28. 28. 28. 28. 28. 28. 28.
APPLICATION PILLING DATE PILLING DATE PILLING DATE APPLICATION FILLING DATE APPLICATION FILLING DATE APPLICATION FILLING DATE APPLICATION FILLING DATE APPLICATION FILLING DATE	FILING DATE APPLICATION	APPLICATION APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION APPLICATION FILING DATE APPLICATION
PRIOR	PRIOR	PRIOR

87 LGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTN 146 272 VGLVSLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 329 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG- 203 30 YNORIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVV 86 389 LTGGVDSCQCDSGGPLVCQERRLWKLVGATSFGIGCAEVNKPGVYTRVTSFLDWIHEQM 447 204 -GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 261 33.0%; Score 468.5; DB 9; Length 453; 38.1%; Pred. No. 4.5e-34; Live 40; Mismatches 97; Indels 11 R APPLICATION NUMBER: 60/08441

R FILING DATE: 1998-05-06

R FILING DATE: 1998-05-07

R APPLICATION NUMBER: 60/084637

R APPLICATION NUMBER: 60/084639

R FILING DATE: 1998-05-07

R FILING DATE: 1998-05-07

R FILING DATE: 1998-05-07 DR FILING DATE: 1998-05-07
DR APPLICATION NUMBER: 60/085339
DR FILING DATE: 1998-05-13
DR APPLICATION NUMBER: 60/085338
DR FILING DATE: 1998-05-13
DR APPLICATION NUMBER: 60/085323 R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083742
RR FILING DATE: 1998-04-30
RR APPLICATION NUMBER: 60/084366
RR FILING DATE: 1998-05-05
RR APPLICATION NUMBER: 60/084414
RR FILING DATE: 1998-05-06 R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/084600
R FILING DATE: 1998-05-07
R PELLING DATE: 1998-05-07
RR FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/084643 APPLICATION NUMBER: 60/083559 FILING DATE: 1998-04-29 APPLICATION NUMBER: 60/083500 APPLICATION NUMBER: 60/085573 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/085704 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/085697 APPLICATION NUMBER: 60/085582 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/085700 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/085689 FILING DATE: 1988-05-15 PPLICATION NUMBER: 60/085579 FILING DATE: 1998-05-15 APPLICATION NUMBER: 60/084598 APPLICATION NUMBER: 60/085580 FILING DATE: 1998-05-15 RESULT 12 US-09-978-697-69 ; Sequence 69, Application US/09978697 FILING DATE: 1998-04-29 FILING DATE: 1998-05-13 Best Local Similarity 38.19 Matches 91; Conservative Query Match PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR à 셤 ò q à g à g

;

```
DR FILING DATE: 1998-03-27

DR APPLICATION NUMBER: 60/079728

DR PILING DATE: 1998-03-27

DR FILING DATE: 1998-03-27

DR FILING DATE: 1998-03-30

DR FILING DATE: 1998-03-30

DR FILING DATE: 1998-03-30

DR FILING DATE: 1998-03-31

DR APPLICATION NUMBER: 60/080105

DR FILING DATE: 1998-03-31

DR APPLICATION NUMBER: 60/080105

DR FILING DATE: 1998-03-31

DR APPLICATION NUMBER: 60/080107

DR FILING DATE: 1998-03-31

DR APPLICATION NUMBER: 60/080107

DR FILING DATE: 1998-03-31

DR APPLICATION NUMBER: 60/080165

DR FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R APPLICATION NUMBER: 60/083495
R FILING DATE: 1998-04-29
RR APPLICATION NUMBER: 60/083496
RR FILING DATE: 1998-04-29
RR APPLICATION NUMBER: 60/083499
RR FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/083392
FILING DATE: 1998-04-29
                                                PRIOR RELIGIOR PRINCIPAL RELIGIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: WOOD, MILIAM I. ACIDS Encoding the Same FILE OF INVENTION: ACIDS Encoding the Same CURRENT APPLICATION NUMBER: US/09/978,697

CURRENT APPLICATION NUMBER: US/09/9865

PRIOR APPLICATION NUMBER: 09/918685

PRIOR FILING DATE: 2001-10-17

PRIOR PILING DATE: 1997-11-0-17

PRIOR PILING DATE: 1997-11-0-17

PRIOR PILING DATE: 1997-11-13

PRIOR FILING DATE: 1997-11-13

PRIOR FILING DATE: 1997-11-13

PRIOR PILING DATE: 1997-11-13

PRIOR PILING DATE: 1997-11-13

PRIOR PILING DATE: 1997-11-13

PRIOR PILING DATE: 1998-03-10

PRIOR PILING DATE: 1998-03-11

PRIOR PILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                 Gerritsen, Mary E.
Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R APPLICATION NUMBER: 60/078936

R FILING DATE: 1998-03-20

R APPLICATION NUMBER: 60/078910

R APPLICATION NUMBER: 60/078939

R APPLICATION NUMBER: 60/078939

R APPLICATION NUMBER: 60/079294

R FILING DATE: 1998-03-25

R APPLICATION NUMBER: 60/079294

R FILING DATE: 1998-03-25

R APPLICATION NUMBER: 60/079656

R APPLICATION NUMBER: 60/079664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-13
APPLICATION NUMBER: 60/078886
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/077649
FILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/077791
FILING DATE: 1998-03-12
APPLICATION NUMBER: 60/078004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/079689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/079663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumas, Daniel
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pan, James;
Paoni, Nicholas F.
                                                                                                                                Eaton, Dan
Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                     Gao, Wei-Qiang
Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-03-2
                                       APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                     Fong, Sherman
  US20020169284A1
```

```
AFFLICANT: WOOD, WILLIAM 1.

ATTILE OF INVENTION: Secretal and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2630P109

CURRENT PAPLICATION NUMBER: US/09/978,192A

CURRENT FILING DATE: 2001-10-15

PRIOR PILING DATE: 2001-07-30

PRIOR PILING DATE: 1997-10-17

PRIOR PILING DATE: 1997-11-03

PRIOR PILING DATE: 1997-11-03

PRIOR FILING DATE: 1997-11-03

PRIOR PILING DATE: 1997-11-13

PRIOR FILING DATE: 1997-11-21

PRIOR PAPLICATION NUMBER: 60/06534

PRIOR PILING DATE: 1997-11-21

PRIOR PILING DATE: 1997-11-21

PRIOR FILING DATE: 1998-03-10

PRIOR PILING DATE: 1998-03-11

PRIOR PILING DATE: 1998-03-12

PRIOR PILING DATE: 1998-03-13

                                                                                           Sequence 69, Application US/09978192A Patent No. US20020177553A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
FILING DATE: 1998-03-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Paoni, Nicholas F.
Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                      Gerritsen, Mary E.
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                              Fong, Sherman
Gao, Wei-Qiang
Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-20
                                                                                                                                                                                          Baker Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul
                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stewart, Timo
Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pan, James
                                                RESULT 13
US-09-978-192A-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272 VGLVSLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87 LGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG- 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330 ENFPDGKVCWTSGWGATEDGGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAGY 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97; Indels 11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30 YNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9; Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33.0%; Score 468.5; DB 9
38.1%; Pred. No. 4.5e-34;
iive 40; Mismatches 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R FILING DATE: 1998-05-07

R APPLICATION NUMBER: 60/084598

R FILING DATE: 1998-05-07

R FILING DATE: 1998-5-07

R APPLICATION NUMBER: 60/084627

R FILING DATE: 1998-05-07

R FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R APPLICATION NUMBER: 60/085700
R APPLICATION NUMBER: 60/085700
R APPLICATION NUMBER: 60/085689
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085579
R RILING DATE: 1998-05-15
R PLILING DATE: 1998-05-15
R PLILING DATE: 1998-05-15
                                                                                                                   R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083559
R APPLICATION NUMBER: 60/08350
R APPLICATION NUMBER: 60/083742
R PILING DATE: 1998-04-29
R PILING DATE: 1998-04-30
R FILING DATE: 1998-04-30
R PILING DATE: 1998-04-30
                                                                                                                                                                                                                                                                                                                R FILING DATE: 1998-05-05
R APPLICATION NUMBER: 60/084414
R FILING DATE: 1998-05-06
R FILING DATE: 1998-06-06
R FILING DATE: 1998-06-06
R FILING DATE: 1998-07-06
R APPLICATION NUMBER: 60/084637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R APPLICATION NUMBER: 60/085339
R FILING DATE: 1998-05-13
R APLICATION NUMBER: 60/085338
R FILING DATE: 1998-05-13
R FILING DATE: 1998-05-13
R FILING DATE: 1998-05-13
R FILING DATE: 1998-05-13
                    FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083554
FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/084640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/084643
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-05-15
APPLICATION NUMBER: 60/085573
APPLICATION NUMBER: 60/083545
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/084639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/085704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/085697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                       PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
```

PRIOR

g

ö g ò

g ò

ò

```
R APPLICATION NUMBER: 60/079786
R FILING DATE: 1998-03-27
R PTLING DATE: 1998-03-30
R PTLING DATE: 1998-03-30
R PTLING DATE: 1998-03-30
R PTLING DATE: 1998-03-30
R APPLICATION NUMBER: 60/080105
R PTLING DATE: 1998-03-31
R PELLING DATE: 1998-03-31
R PTLING DATE: 1998-03-31
R PTLING DATE: 1998-03-31
R APPLICATION NUMBER: 60/080165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A FFLICATION NUMBER: 60/080334
R FILING DATE: 1998-04-01
R FILING DATE: 1998-04-01
R FILING DATE: 1998-04-08
R FILING DATE: 1998-04-08
R PAPLICATION NUMBER: 60/081049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R FILING DATE: 1998-04-08

R APPLICATION NUMBER: 60/081071

R FILING DATE: 1998-04-08

R R FILING DATE: 1998-04-08

R R FILING DATE: 1998-04-08

R R FILING DATE: 1998-04-08

R R FILING DATE: 1998-04-09

R APPLICATION NUMBER: 60/081203

R APPLICATION NUMBER: 60/081203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R FILING DATE: 1998-04-15
R APPLICATION NUMBER: 60/081838
R FILING DATE: 1998-04-15
R APPLICATION NUMBER: 60/082569
R FILING DATE: 1998-04-21
R APPLICATION NUMBER: 60/082569
R FILING DATE: 1998-04-21
R APPLICATION NUMBER: 60/082704
R APPLICATION NUMBER: 60/082704
R FILING DATE: 1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/081817
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081819
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-04-22
APPLICATION NUMBER: 60/082797
FILING DATE: 1998-04-22
APPLICATION NUMBER: 60/082796
FILING DATE: 1998-04-23
APPLICATION NUMBER: 60/079663
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/080328
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081955
FILING DATE: 1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/082804
FILING DATE: 1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LICATION NUMBER: 60/083336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/080327
FILING DATE: 1998-04-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/082700
```

30 YNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVV 86 Length 453; Indels DB 9; .5e-34; Query Match
33.0%; Score 468.5;
Best Local Similarity 38.1%; Pred. No. 4.5e
Matches 91; Conservative 40; Mismatches PRIOR APPLICATION NUMBER: 60/083496
PRIOR FILING DATE: 1998-04-29
PRIOR FILING DATE: 1998-04-29
PRIOR FILING DATE: 1998-04-29
PRIOR FILING DATE: 1998-04-29
PRIOR PELING DATE: 1998-04-39
PRIOR PELING DATE: 1998-05-06
PRIOR PELING DATE: 1998-05-06
PRIOR PELING DATE: 1998-05-07
PRIOR PELING DATE: 1998-05-13
PRIOR PELING DATE: 1998-05-15
ð qq

; 9

LGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTN 146 

87

ò g 147

EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNOC--RQYWGARITDAMICAG-

60/077649

qq

g õ

```
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-11
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078886
PRIOR APPLICATION NUMBER: 60/078939
PRIOR FILING DATE: 1998-03-20
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR FILING DATE: 1998-03-31
PRIOR PILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080137
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/08033
PRIOR FILING DATE: 1998-04-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/083559
FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/084366
APPLICATION NUMBER: 60/084414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/082568
FILING DATE: 1998-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/082569
FILING DATE: 1998-04-21
APPLICATION NUMBER: 60/082704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/083499
FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-05-22
APPLICATION NUMBER: 60/087098
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/081070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/081838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-04-22
APPLICATION UNMBER: 60/082797
FILING DATE: 1998-04-22
APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-04-28
APPLICATION NUMBER: 60/083495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-05-06
APPLICATION NUMBER: 60/084639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/084640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/084643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/085573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/085579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/085580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/085582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/085700 FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/081195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/086023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-04-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-05-15
FILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-05-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRRIOR PRESENTANT PRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430RLC1
CURRENT APPLICATION UNBER: US/10/052,586
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: 60/059263
330 ENFPDGKVCWTSGWGATEDGGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAGY 388
                                              R FILING DATE: 1997-0918
R APPLICATION NUMBER: 60/059266
R FILING DATE: 1997-09-18
R FILING DATE: 1997-09-18
R FILING DATE: 1997-10-17
R APPLICATION NUMBER: 60/063120
R FILING DATE: 1997-10-17
                                                                                                                                                                                                                              Sequence 64, Application US/10052586 Patent No. US20020127584A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/063121
FILING DATE: 1997-10-24
APPLICATION NUMBER: 60/063486
FILING DATE: 1997-10-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/063540 FILING DATE: 1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/063870 FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/064103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/066466
FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-11-24
APPLICATION NUMBER: 60/069335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-12-11
APPLICATION NUMBER: 60/069425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-12-12
APPLICATION NUMBER: 60/069870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/063541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/063734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/066120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/066772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/068017
FILING DATE: 1997-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/077450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/063544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/063564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/077632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-10-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-10-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
Watanabe, Colin K.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-10-31
                                                                                                                                                                                                                                                                                                                                                             Desnoyers, Luc
Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-11-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1997-12-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-03-1
                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                             RESULT 14
US-10-052-586-64
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
```

272 VGLVSLLDNPAPSHL---VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 329

g ò g ò 8

330 ENFPDGKVCWTSGWGATEDGGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAGY 388

147 EALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG-

Nucleic Acids, Proteins and Antibodies

Sequence 1017, Application US/09925301 Patent No. US20020052308A1

US-09-925-301-1017

RESULT 15

GENERAL INFORMATION

APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA106
CURRENT APPLICATION NUMBER: US/09/925,301
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05882
PRIOR PILING DATE: 2000-03-08
PRIOR FILING DATE: 1999-03112
NUMBER OF SEQ ID NOS: 1694
SOFTWARE: Patentin Ver. 2.0

```
13.0%; Score 468.5; llarity 38.1%; Pred. No. 4.5e Conservative 40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A APPLICATION NUMBER: 60/088722

R FILING DATE: 1998-06-10

A PPLICATION NUMBER: 60/088738

R FILING DATE: 1998-06-10

R APPLICATION NUMBER: 60/088740

R TRING DATE: 1998-06-10

R APPLICATION NUMBER: 60/088811

R FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                               LICATION NUMBER: 60/088167
ING DATE: 1998-06-05
ICATION NUMBER: 60/088202
ING DATE: 1998-06-05
                                                                                                                                                                                                         FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088028
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/08863
FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/08876
FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/089105
FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/089514
FILING DATE: 1998-06-16
                       NG DATE: 1998-05-28 ICATION NUMBER: 60/087609
                                                                                        APPLICATION NUMBER: 60/087759
FILING DATE: 1998-06-02
                                                                                                                                   APPLICATION NUMBER: 60/087827
FILING DATE: 1998-06-03
                                                                                                                                                                                 APPLICATION NUMBER: 60/088025
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                              ICATION NUMBER: 60/088029
                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088033
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                               JICATION NUMBER: 60/088212 ING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088217
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ICATION NUMBER: 60/088655
NG DATE: 1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088824
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATION NUMBER: 60/088825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ICATION NUMBER: 60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ICATION NUMBER: 60/088861
NG DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/089090
FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089653
APPLICATION NUMBER: 60/087208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/089908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-10
                                                                ILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING
```

; ORGANISM: Homo sapiens US-09-925-301-1017

SEQ ID NO 1017

```
87 LGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTN 146
                                                                                                                                                                                                    66 VGLVSLLDNPAPSHL--VEKIVYHSKYRPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 123
                                                                                                                                                                                                                                                         147 EALPSGLTCVTTGWGRI-SGVGNVTPARLQQVVLPLVTVNQC--RQYWGARITDAMICAG 203
                                                                                                                                                                                                                                                                                 --GSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVM 261
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                   30 YNORIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVV 86
                                                                                                                  Indels 12;
    Length 248;
Query Match 33.0%; Score 468; DB 10; Best Local Similarity 38.3%; Pred. No. 2.4e-34; Matches 92; Conservative 40; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Search completed: December 20, 2002, 15:21:07 Job time : 9.34783 secs
                                                                                      ò
                                                                                                                               g
                                                                                                                                                                       õ
                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                          ò
```

.:

. 9

DB 12; Length 453; 97; Indels

.5e-34;

Local Similarity nes 91; Conserv

Best Loca Matches

ð

30 YNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHC---QVTPGRHFVV 86 음

LGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTN 146 87 ò

								-
							,	
			·					
				·			•	
				·				
		•						
			•					
gp ³								
3			•		•			
1								
Section 1								
4						•		
<b>3</b>	•							
ā.	1							
	1							
• • • • • • • • • • • • • • • • • • •	17 - AF			and the course of the	And Andrews			

```
Appl
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Appli
Appli
Appli
Appli
Appli
                                                                                                                                             (without alignments)
519.349 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                       ; Search time 14.9565 Seconds
                                                                                                                                                                                                    US-09-856-319B-4
1418
1 MLLLSLTLSLVLLGSSWGCG.........AMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sedinence sedine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1: /cgn2_6/ptodata/1/laa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/laa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/laa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/laa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/laa/pCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/laa/pCTUS_COMB.pep:*
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-557-146-13
US-08-557-146-13
US-08-278-091-10
US-08-472-173-10
US-08-472-173-10
US-08-487-167-10
US-08-296-149-10
US-08-801-499-10
US-08-801-499-10
US-09-074-660-10
US-09-074-660-10
US-09-074-660-10
US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-106-466A-10
                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-106-467-10
US-08-750-711-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-429-743-1
                                                                                                                                                                                                                                                                                                                                                     262574 segs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                     December 20, 2002, 15:14:53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

                                                                                                                                                                                                                                                                                                           Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB :
Maximum DB :
                                                                                 OM protein
                                                                                                                                                                                                                                                 Sednence:
                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
```

```
APPLICANT: O'Brien, Timothy J.
APPLICANT: Tanimoto, Hirotoshi
TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease Overexpressed in
TITLE OF INVENTION: Breast and Ovarian Carcinomas
FILE REFERENCE: D6064
CURRENT APPLICATION NUBER: US/09/027,337B
CURRENT FILING DATE: 1998-02-20
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Serine protease catalytic domain of chymotrypsin (Chymb) OTHER INFORMATION: homologous to similar domain in TADG-15
                                                                                                                                                               Sequence 54, Appl
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
                                                            Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Patent No. 5200340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 RIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDR 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           153 LTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQG
        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180 DSGGPLVCQKDGAWTLVGIVSWGSDTCSTSSPGVYARVTKLIPWVQKILAAN 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.3%; Score 755.5; DB 2; Length 231; 58.2%; Pred. No. 5.7e-64; ive 35; Mismatches 61; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         213 DSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINDVMAYN 264
US-08-866-735-1

US-09-066-028-1

US-08-643-219-1

US-08-643-219-1

US-08-851-350-1

US-08-469-486-54

US-08-469-658-54

US-08-131-995-1

US-09-131-995-1

US-09-132-154-1

US-09-132-154-1

US-08-132-154-1

US-08-132-154-1

US-08-132-154-1

US-08-132-154-1

US-08-132-154-1

US-08-132-154-1
                                                                                                                                                                                                                                                                                                                                                                                           5200340-8
US-08-568-031-2
US-08-966-319-2
US-09-153-304-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-027-337-6
; Sequence 6, Application US/09027337B
; Patent No. 5972616
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-644-600-6
Sequence 6, Application US/09644600
Patent No. 6451500
GENERAL INFORMATION:
APPLICANT: 0'Brien, Timothy J.
APPLICANT: Tanimoto, Hirotoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 58.2
Matches 135; Conservative
     812
812
812
812
791
7791
7791
7791
7791
7791
810
810
810
810
810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFURN
US-09-027-337-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 6
LENGTH: 231
     485.5
485.5
485.5
485.5
                                                                                                                                                                                                                                                                                                                                                                                                                          483.5
483.5
483.5
                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
     8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

8000

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
APPLICATION NUMBER:
                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-08-557-146-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.
APPLICANT: KLASS, MICHAEL R.
APPLICANT: KLASS, MICHAEL R.
APPLICANT: STEWART, KENT D.
APPLICANT: STRONDE, STEVEN D.
APPLICANT: STRONDE, STEVEN D.
APPLICANT: TITLE OF INVENTION: AND METHODOS USEFUL FOR DETECTING AND TREATING DISEASES TITLE OF INVENTION: OF THE PROSTATE
                                                                                                                                                                                                                                                                                                                                                                                                                ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93 SSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSG 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153 LTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQG 212
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33 RIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDR 92
                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213 DSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180 DSGGPLVCQKDGAWTLVGIVSWGSDTCSTSSPGVYARVTKLIPWVQKILAAN 231
                                                                                                                                                                                                                                                                                                                                                                        Length 231;
TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease TITLE OF INVENTION: Overexpressed in Carcinomas
                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                 Query Match 53.3%; Score 755.5; DB 4; Best Local Similarity 58.2%; Pred. No. 5.7e-64; Matches 135; Conservative 35; Mismatches 61;
                   Overexpressed in Carcinomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
SOFTWARE: FastESQ for Windows Version 2.0
CNERRY APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
                                    FILE REFERENCE: D6064CIP/D
CURRENT APPLICATION NUMBER: US/09/644,600
CURRENT FILING DATE: 2000-08-23
PRIOR APPLICATION NUMBER: 09/421,213
PRIOR FILING DATE: 1999-10-20
PRIOR FILING DATE: 1999-10-20
PRIOR FILING DATE: 1999-02-20
NUMBER OF SEQ ID NOS: 98
SEQ ID NO SEQ ID NOS: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: Abbott Laboratories
100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Sequence 62, Application US/08944483; Patent No. 6232456
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: COHEN, MAURICE
APPLICANT: COLFITTS, TRACEY L.
APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.
                                                                                                                                                                                                                                                                                  FEATURE:
; OTHER INFORMATION: Chymotrypsin
US-09-644-600-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: DISACCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott La
STREET: 100 Abbott P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 60064-3500
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Abbott Park
STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-944-483-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120 LCATTGWGKTKYNANKTPDKLQQAALPLLSNAECKKSWGRRITDVMICAGASGVSSCMGD 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDGG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13, Application US/08557146
Patent No. 5834290
GENERAL INFORMATION:
APPLICANT: Egelrud, Torbjorn
APPLICANT: Hansson, Lennart
TITLE OF INVENTION: Recombinant Stratum Corneum Chymotryptic
TITLE OF INVENTION: Bazyme (SCCE)
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: White & Case, Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 SGGPLVCQKDGAWTLVGIVSWGSDTCSTSSPGVYARVTKLIPWVQKILAAN 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 52.9%; Score 750.5; DB 4
Best Local Similarity 58.0%; Pred. No. 1.7e-63;
Matches 134; Conservative 35; Mismatches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: White & Case, Patent Department STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Sterner, Richard J.
REGISTRATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 1103326-181
TELECOMUNICATION INFORMATION:
TELEPHONE: (212) 819-8783
TELEFAX: (212) 354-8113
                                                                                6183.US.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2787
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/557,146
FILING DATE: 14-DEC-1995
CLASSIFICATION: 424
                           NAME: Becker, Cheryl L. REGISTRATION NUMBER: 35,441
                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
                                                                                                                                                                                  TELEX:
INFORMATION FOR SEQ ID NO: 62:
SEQUENCE CHARACTERISTICS:
LENGTH: 230 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY: linear; MOLECULE TYPE: No. 6232456e
US-08-944-483-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 14-DEC-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                REFERENCE/DOCKET NUMBER:
```

ä

..

```
94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                        154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                      Gaps
                                                                                                                                                                1 IVNGEDAVPGSWPWQVSLQDKTGFHFCGGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQG 59
                                                                                                                                         34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                             214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                              Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1PF.
COMPUTER REDABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/278,091
FILING DATE: 21-JUL-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
APPLICANT: TANG, Yan-Ping
APPLICANT: OOMEN, Rapmond P.
APPLICANT: OOMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 irrite OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.1%; Score 724.5; DB 1
57.1%; Pred. No. 4.9e-61;
tive 34; Mismatches 62
                                                            Score 737; DB 2;
Pred. No. 3.2e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                  36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10, Application US/08278091
Patent No. 5506139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Stewart, Michael I
REGIESTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                            52.0%;
  polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 228 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 57.19
Matches 132; Conservative
                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SS: single
linear
                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
US-08-278-091-10
          ; MULECULE 111
US-09-154-344-13
                                                                                                    Matches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                 g
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                  154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                            SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                   34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTLE OF INVENTION: Recombinant Stratum Corneum Chymotryptic TITLE OF INVENTION: Recombinant Stratum Corneum Chymotryptic TITLE OF INVENTION: Enzyme (SCCE)
NUMBER OF SEQUENCES: 17
ADDRESS: ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                 Length 229;
                                                                                                                                                                             52.0%; Score 737; DB 2; Length 22
57.6%; Pred. No. 3.2e-62;
tive 36; Mismatches 60; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: White & Case, Patent Department STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Sterner, Richard J.
REGISTATION NUMBER: 35,372
REFERENCE/DOCKET NUMBER: 1103326-181
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 08/557,146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/154,344 FILING DATE: 16-SEP-1998 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 13, Application US/09154344
Patent No. 5981256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (212) 819-8783
TELEPRX: (212) 34-8113
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 229 amino acids
TYPE: amino acids
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Egelrud, Torbjorn
APPLICANT: Hansson, Lennart
INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 01
FILING DATE: 14-DEC-1995
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                              ; TOPOLOGY: linear
; MOLECULE TYPE: polypeptide
US-08-557-146-13
                                     LENGTH: 229 amino acids
TYPE: amino acids
STRANDEDNESS: single
                                                                                                                                                                                                                     Matches 133; Conservative
                    SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: New York
TRY: U.S.A.
10036-2787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-154-344-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                               Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                            94
                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                    윱
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
```

```
SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD
                                                                                                                                                                  SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: Suite 7
CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                US-08-472-173-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-472-173-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                   94
                                                                                            154
                                                                                                                                                                    214
                                                                                                                                                                                                       178
                                                                                                                         a
                                                      d
                                                                                            ö
                                                                                                                                                                    ŏ
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3;
                                                                              60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                               154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                    94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
1 IVNGEBAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3;
                                                                                                                                                                                                                                                                                                                                   Sequence 10, Application US/08483859
Patent No. 5556436
GENERAL INFORMATION:
APPLICANT: LOOSMONE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                           178 SGGPLVCKKNGAWILVGIVSWGSSICSISIPGVYARVIALVNWVQQILAAN 228
                                                                                                                                                                                                       214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Score 724.5; DB 1
; Pred. No. 4.9e-61;
34; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 1038-495 MIS:vg TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 07-UNY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-UU-1994
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/483,859
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Stewart, Michael I. REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.1%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCBUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY:
US-08-483-859-10
                                                                                                                                                                                                                                                                                                                       US-08-483-859-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                             ò
                                                                                                                                                                g
                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                 셤
                                                      ò
                                                                                          a
```

```
94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 IVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGVTTS-DVVVAGEFDQG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                Analog of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 228;
SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/472,173
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.9e-61;
                                                                                                                                                                                                                                                                                                                                                                         Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1038-493 MIS:vg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 51.1%; Score 724.5; Best Local Similarity 57.1%; Pred. No. 4.96 Matches 132; Conservative 34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: Canada
ZIF: MSG IR7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, N
                                                                                                                                             Sequence 10, Application US/08472173 Patent No. 5665353
                                                                                                                                                                                                                  APPLICANT: LOGSMORE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OOMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Reduced Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Stewart, Michael I.
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Óλ
```

3,

us-09-856-319b-4.rai

```
3;
213
                                                                         SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Haemophilus Hin47 Protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 228;
                                                                                                                                                   SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: INGOSMORE, Sheena M.
APPLICANT: TANG, Yan-Ping
APPLICANT: GOMEN, Raymond P.
APPLICANT: COMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
STREET: Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 51.1%; Score 724.5; DB 2; Best Local Similarity 57.1%; Pred. No. 4.9e-61; Matches 132; Conservative 34; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 1038-508 MIS:vg
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT AREAS TO THE ACTION OF A PPLICATION DATA:
APPLICATION NUMBER: US/08/487,167
FILING DATE: 07-JUN-1995
CLASSIFFCATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                        Sequence 10, Application US/08487167 Patent No. 5869302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Stewart, Michael I. REGISTRATION NUMBER: 24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 228 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: Suite 70
CITY: Toronto
STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                            214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                      ð
                                                                                       a
                                                                                                                            ò
                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
APPLICANT: LOGSWORE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: OMEN, Raymond P
APPLICANT: NLEIN, Michel H.
APPLICANT: NLEIN, Michel H.
APPLICANT: SLOURNCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                          94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 228;
                                                                                                                                                                     214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: PC-LUDS/MS-LUDS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,816
FILING DATE: 07-JUN-1995
CLASSIFICATION NUMBER: US 08/296,149
FILING APPLICATION NUMBER: US 08/296,149
FILING DATE: G-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
FILING DATE: 25-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAMME: Stewart, MIChael I
REGISTRATION NUMBER: 1038-494 MIS:V9
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECHOME: (416) 595-1163
INFORMATION FOR SED ID NO: 10:
SEQUENCE CHARACTERISTICS:
TEMPRORY OF A PARION AND ACTION AND ACTOR AND ACTION AND ACTOR ACTION AND A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 724.5; DB 2;
Pred. No. 4.9e-61;
----hes 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                        Sequence 10, Application US/08482816 Patent No. 5935573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.1%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 132; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: Canada
ZIP: M5G 1R7
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: Suite 7 CITY: Toronto STATE: Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                     RESULT 10
US-08-482-816-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-482-816-10
154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 154
à
                                                            g
                                                                                                                                  ò
                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY:
US-08-801-499-10
   US-08-801-499-10
                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
120 TCVTTGWG-LTRYAN-TPDRLQQASLPLLSNTNCKKYWGTKIKDAMICAGASGVSSCMGD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94 SNAEPVQVLSIARAITHPNWNANTWNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: LOOSMORE, Sheena M
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: CANEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 228;
                                   SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                   SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SYSTEM: PC-DOS/MS-DOS
PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51.1%; Score 724.5; DB 2; illarity 57.1%; Pred. No. 4.9e-61; Conservative 34; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                               E: Sim & McBurney
Suite 701, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-390
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416,595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,149
                                                                                                                                                    Sequence 10, Application US/08296149 Patent No. 5939297 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS ADDRESSEE: Sim & MCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 132; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                              RY: Canada
M5G 1R7
                                                                                                                                                                                                                                                                                                                                                               ADDALL
STREET: Sur.
TTW: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                  Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
US-08-296-149-10
                                                                                                                                     US-08-296-149-10
                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                   214
                                                                 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    214
                                                                                                                      RESULT 11
                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

RESULT 12

```
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: COMEN, Raymond P.
APPLICANT: KLEIN, Michel H.
APPLICANT: KLEIN, Michel H.
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/801,499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51.1%; Score 724.5; DB 2 57.1%; Pred. No. 4.9e-61;
                                                                                                                                                                                                                                                                 ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-671 MIS: jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/482,816
FILING DATE: 07-UN-1995
PRIOR APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-UUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: CFANCE AND ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
Sequence 10, Application US/08801499
Patent No. 5962430
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34;
                                                                         LOOSMORE, Sheena M
YANG, Yan-Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                   STATE: Ontario
COUNTRY: Canada
ZIP: MSG 1R7.
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match_
Best Local Similarity
Matches 132; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
```

```
94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD
   APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with
TITLE OF INVENTION: Reduced Protease Activity
NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,660
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51.1%; Score 724.5; DB 3; 57.1%; Pred. No. 4.9e-61; tive 34; Mismatches 62;
                                                                                                                 ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1038-731 MIS: jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRICE APPLICATION DATA:
APPLICATION NUMBER: US 08/487,167
FILING DATE: 07-40N-1995
FILING DATE: 07-40N-1995
APPLICATION DATA:
APPLICATION NUMBER: US 08/296,149
FILING DATE: 26-AUG-1994
PRICE APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-40L-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10, Application US/09074659
Patent No. 6025342
GENERAL INFORMATION:
APPLICANT: LOOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (416) 595-1155
TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Stewart, Michael I
REGISTRAILION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                     NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 132; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                 COUNTRY: Canada
ZIP: M5G 1R7
                                                                                                                                                                                                                                     STATE: Ontario
COUNTRY: Canada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-074-659-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-074-660-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60 SSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154 TCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGD 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                             APPLICANT: LOOSMOKE, Sheena M.
APPLICANT: ARMS, VANG, Pele
APPLICANT: CHONG, Pele
APPLICANT: CHONG, Pele
APPLICANT: OONEN, Raymond P.
APPLICANT: KLEIN, Michel H.
TITLE OF INVENTION: PROTEASE ACTIVITY
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & MCBurney
STRRET: 6th Floor, 330 University Avenue
CITY: Tontatio
COUNTRY: Canada
ZIP: MEG INA
ZIP: MEG INA
ZIP: MED MICHORY ALSO
ZIP: MED MICHORY AND ALSO
ZIP: MED MICHORY ALSO
ZIP: MED MICHORY ALSO
MED LIMITATION AND ALSO
ZIP: MED MICHORY ALSO
ZIP: MICHORY ALSO
ZI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 20-JUN-1996
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 57.1%; Pred. No. 4.9e-61;
Matches 132; Conservative 34; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.1%; Score 724.5; DB 57.1%; Pred. No. 4.9e-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/09074660
Patent No. 6020183
GENERAL INFORMATION:
APPLICANT: LOSMORE, Sheena M.
APPLICANT: YANG, Yan-Ping
APPLICANT: CHONG, Pele
APPLICANT: OOMEN, Raymond P.
                     Sequence 10, Application US/08615271
Patent No. 5981503
GENERATION:
APPLICANT: LOOSMORE, Sheena M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Stewart, Michael I
REGISTRATION NUMBER: 24,973
REFRENCE/DOCKET NUMBER: 1038
TELECOMMUNICATION INFORMATION:
TELEPAN: (416) 595-1163
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 228 maino acids
TYRE: amino acids
TYRE: amino acids
STRANBENESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-615-271-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-074-660-10
US-08-615-271-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

ω, ..

```
ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 SSSEKIQKLKIAKVEKRISKYNSLTINNDITLIKLSTAASFSOTVSAVCLPSASDDFAAGT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94 SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSGL 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34 IVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRS 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                э;
Э
                                    TITLE OF INVENTION: Analog of Haemophilus Hin47 Protein with TITLE OF INVENTION: Reduced Protease Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3; Length 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    214 SGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                           CITY: Toronto
STATE: Ontario
COMNTRY: Canada
ZIP: MSG IR/
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,659
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51.1%; Score 724.5; DB 3, 57.1%; Pred. No. 4.9e-61; tive 34; Mismatches 62.
                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION UNBER: US 08/487,167
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION UNDRAR: US 08/296,149
FILING DATE: 26-AUG-1994
PRIOR APPLICATION NUMBER: US 08/278,091
FILING DATE: 21-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Stewart, Michael I.
REGISTRATION UNBER: 24,973
REGISTRATION UNBER: 24,973
REFERENCE/DOCKET NUMBER: 1038-730 MIS:jb
TELECOMMUNICATION: INFORMATION:
                                                                                                                       ADDRESSEE: Sim & McBurney
STREET: 6th Floor, 330 University Avenue
CITY: Toronto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION (416) 595-1155
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH = 228 amino acids
TYPE: amino acid
STRANDEDNESS: single
OOMEN, Raymond P. KLEIN, Michel H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 57.19
Matches 132; Conservative
                                                                                NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: SIM & MCB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: linear
US-09-074-659-10
  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

Search completed: December 20, 2002, 15:20:37 Job time: 15.9565 secs

paralichthy

09w7q1

091674 xenopus lae 091674 xenopus lae 094760 paraalichthy 091039 gadus morhu 091846 homo sapien 096679 homo sapien 096679 homo sapien 096679 acolopendra 019023 macaca mula 019023 macropus eu 092044 mus musculu 09508 mus musculu 09506 petromyzon 04208 petromyzon 04208 petromyzon 04208 petromyzon 042158 mus musculu 08644 macaca fasc 092179 mus musculu 08678 mus musculu 086186 mus musculu 08618 anuni la ja 092083 anunila ja 092083 rattus norv

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bjoernslett M.;
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mitsui S., Yamaguchi N.;
"Molecular cloning of mouse chymopasin.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9ER05 PRELIMINARY; PRT; 264 AA.
01-ER05;
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
CTRL OR CTRAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEROPS; 501.256; -. MGD; MGT.88558; Ctrl.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001324; Ser_protease_Try.
Pfinn; PF00089; trypsin; I.
PR031TS; PR00722; CTMVOTRYPSIN.
SMARY; SM00020; Tryp_SPC; I.
PR0SITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS00134; TRYPSIN_LHIS; UNKNOWN_I.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALIGNMENTS
                    Q9W7Q1
Q91674
Q9W7Q0
Q91039
Q91WJ5
Q15146
                                                                                                                                                                                                                                                                                                 0921N4
018783
080GF6
08VDE0
046506
042608
042158
                                                                                                                                                                                                                                                                                                                                                                                                                                                              046644
0921R9
QBR1A6
Q9QUK9
Q8QGW3
Q920K3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-129S6/SVEVTAC; TISSUE-SPLEEN;
                                                                                                                                                                                                                                       Q9W7Q2
Q99L44
Q9R0W3
                                                                                                                                                                                                  019023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AB016228; BAB20275.1; -. EMBL; AF236365; AAL11034.1; -.
                                                                                                                                                               Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
  NCB1_TaxID=10090;
                                                                                                                                                                                                                                                         4666.5

465.5

465.5

455.5

455.5

455.5

455.5

455.5

445.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

446.5

4
508.5
503
499
494
488.5
485
485
470.5
468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
Q9ER05
  09d7p8 mus musculu 09d960 mus musculu 09d960 mus musculu 09d947q4 paralichthy 09w7q4 paralichthy 09c7s mus musculu 09c88 mus musculu 09c9c52 mus musculu 09c9c52 mus musculu 09c452 mus musculu 09c452 mus musculu 09c479 mus musculu 09c479 mus musculu 09c479 mus musculu 09c477 mus musculu 09c471 musculu 09c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9er05 mus musculu
                                                                                                                                                            (without alignments)
1663.721 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                      December 20, 2002, 15:14:08 ; Search time 32.6957 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                US-09-856-319B-4
1418
1 MLLLSLTLSLVLLGSSWGCG......AMYTRVSKFSTWINQVMAYN
                    GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                          671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                 OM protein – protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          096R05
0907P8
090704
098028
099028
090083
090083
090088
090082
090095
090077
090077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_organelle:*
sp_phage:*
sp_plant:*
sp_rodent:*
sp_rodent:*
sp_vrus:*
sp_vrus:*
sp_vribited:*
sp_vribited:*
                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_archea:*
sp_barchea:*
sp_tung1:*
sp_tung1:*
sp_human:*
sp_invertebrate:*
sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264
264
2663
2663
2663
2663
2669
2660
2660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1365
894.5
894.5
795.5
7895.5
758.5
758.5
674
533.5
510
                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                      Title:
Perfect score:
```

..

Database

Result è.

Sequence:

.. 0

Run

Searched:

ö

```
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AK007333; BAB24967.1; -.
                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
Q9D960
  DR DR B DR SO S
                                                                                                                                                                   ð
                                                                                                                                                                                          g
                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RC STRAIN-C57BL/63; TISSUE-TONGUE;
RA KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Radawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Radito T., Oƙazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Radota K., Matsuda H.A., Sissi C., King B., Kochiwa H.,
Radota K., Matsudo Y., Nikaido I., Pesole G., Quackenbush J.,
Rochriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Rawai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Rawashim M.J., Bult C., Fletcher C., Fullta M., Gariboldi M.,
Ray Gustinoich S., Hill D., Hofman M., Hume D.A., Kamiya M., Lee N.H.,
Ryons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
Ryons P., Rang B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Rymshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Havashirahi V.
                                                                                                                                                                                                                                                240
                                                                                                                                     GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                   61 GGSLISPNWYVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                        121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                             Gaps
                                                                                  9
                                                                                               1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                         LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Functional annotation of a full-length mouse cDNA collection.";
                                                       ;
0
                             Length 264;
                                                       Indels
 28135 MW; 1D979709A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                            DB 11;
                           ; Score 1418; DB 11;
; Pred. No. 1.4e-118;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                 264 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_fry.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                 241 IQAPAMYTRVSKFSTWINOVWAYN 264
                                                                                                                                                                                                                                                                                                   IQAPAMYTRVSKFSTWINQVMAYN 264
                            100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AK009019; BAB26029.1;
                                                    Matches 264; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 409:685-690(2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1810004D15Rik protein.
CTRL OR 1810004D15RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEROPS; S01.256; -.
MGD; MGI:88558; Ctrl.
264 AA;
                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRYPSIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hayashizaki Y.;
 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                            Q9D7P8;
                                                                                                                                                                                                                                                                                                                                                                                                09D7P8
                                                                                                                                     61
                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
Q9D7P8
 တ္ထ
                                                                                                          g
                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                        ò
                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                  ò
```

```
SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN-C57BL/6J; TISSUE-PANCREAS;

KAMELINE-Z1085660; PubMed-11217851;

RA MAZAWA T., Hara A., Fukunishi Y., Yoshino M., Itoh M., Ishii Y.,

RA AZAWA T., Izawa M., Nishi K., Kiyosawa H., Rondo S., Yamanaka I.,

RA AZAWA T., Okazaki Y., Gojboori T., Bono H., Rasukawa T., Saito R.,

RA Gaito T., Okazaki Y., Gojboori T., Bono H., Rasukawa T., Saito R.,

RA Gaito T., Okazaki Y., Gojboori T., Bono H., Rasukawa T., Saito R.,

RA Gaito T., Okazaki Y., Gojboori T., Enon H., Rochiwa H.,

RA Gaito P., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Schriml L.M., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,

RA Gustincich S., Hill D., Romana J., Mazzarelli J., Mombaerts P.,

RA Ordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Saxaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Winshaw-Borits A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

B. Mayashav-Boris A., Yoshida K., Rasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                         DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                           Length 264;
                                                                                                                                                28167 MW; 1D979469A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                     Score 1414; DB 11;
Pred. No. 3.1e-118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                264 AA
                                                                                                                                                                                                                                    Pred. No. 3.16
0; Mismatches
SMART; SM00020; Tryp_SPC; 1.
POSCITE; PS550240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 IQAPAMYTRVSKFSTWINQVMCYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                           99.78;
                                                                                                                                                                                                                                       99.68;
                                                                                                                     Hydrolase; Serine protease.
SEQUENCE 264 AA; 28167 M
                                                                                                                                                                                                        Query Match
Best Local Similarity 99.6
Matches 263; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2002 (TrEMBLrel
1810004D15Rik protein.
CTRL OR 1810004D15RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2001
01-JUN-2001
                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9D960;
Q9D960;
```

ö

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9W7Q4
Q9W7Q4;
                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59
                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                            ò
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                             à
                                                                                                                                                  쉽
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ь.
                                                                                                                                                                                                                                                                                                                                                                                                      181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular cloning of rat chymopasin.";
Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
TISSUE-RAT PANCREAS;
Sogame Y., Mitsui S., Kataoka K., Kashima K., Kato M., Sakagami
Yamaquchi N.;
                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                 Length 264;
               MEROPS; SO1.256; ...
MGD; MOI:88558; Ctrl.
Interpro: IPR001314; Chymotrypsin.
Interpro: IPR001314; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS50134; TRYPSIN_LOM; 1.
PROSITE; PS00134; TRYPSIN_LS; UNKNOWN_I.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
SEQUENCE 264 AA; 28151 MW; 1D979719E07C16DE CRC64;
                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28116 MW; F9ED5D210FD3500E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-WAR-2001 (TrEMBLrel. 16, Created)
01-WAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                          Score 1408; DB 11;
Pred. No. 1.1e-117;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; JOL 1200; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
SMINTS; PR00722; CHYMOTRYPSIN.
SMINTS; PR00722; CHYMOTRYPSIN.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
Hydrolase; Serine protease..
SEQUENCE 264 AA; 28116 MW; F9ED5D210FD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRYPSIN FAMILY.
EMBL; AB020757; BAB20287.1; -.
HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                 99.3%;
99.6%;
                                                                                                                                                                                                                                                                                                                     Best Local Similarity 99.6
Matches 263; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEROPS; S01.256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chymopasin.
                                                                                                                                                                                                                                                                                                 Query Match
Best Local 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9EQZ8
Q9EQZ8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09E0Z
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SO OR 
                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                           GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Paralichthys Olivaceus (Flounder).

Eukaryota: Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi;
Ertinopterygli: Neopterygli; Teleosstel; Buteleostel; Neoteleostel;
Acanthomorpha; Acanthopterygli; Percomorpha; Pleuronectiformes;
Pleuronectoidel; Paralichthyldae; Paralichthys.
                                                                                                                                                 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                  LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5,
                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [1]
SEQUENCE FROM N.A.
TISSUE-PANCREAS;
SUZUKİ T., STİVASLEAVA A.S., KUTOKAWA T.;
SUZUKİ T., STİVASLEAVA A.S., KUTOKAWA T.;
"Japanese flounder mRNA for chymotrypsinogen 1.";
SUBMILLEG (JÜL-1999) to the EMBL/GenBank/DDBJ databases.
-- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI; ALSO KNOWN AS TRYPSIN FAMILY.
EMBL; AB029753; BAA82365.1; -.
HSSP; P00763; IDPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13; Length 261;
                  Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63.1%; Score 894.5; DB 13; Length
63.0%; Pred. No. 6.6e-72;
.ive 33; Mismatches 60; Indels
                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hydrolase; Serine protease.
SEQUENCE 261 AA; 28184 MW; D7090A9D65395B7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 12, Last sequence update) (TrEMBLrel. 21, Last annotation update)
Score 1365; DB 11, No. 7.2e-114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MILEPPOS SULT-200; Therefore I PRO01214; Chymotrypsin. InterPro: IPR001254; Ser_protease_Try. Pfam. PF00089; trypsin. I. SMRT; SM00020; Tryp_SPC; I. PR05ITE; PS001020; Tryp_SPC; I. PROSITE; PS00104; TRYPSIN_DOM; I. PROSITE; PS00104; TRYPSIN_HIS; UNKNOWN_I. PROSITE; PS001135; TRYPSIN_HIS; UNKNOWN_I.
                                             ; Pred. No. 7.26
16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last seq
01-JUN-2002 (TrEMBLrel. 21, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 VQAPAMYTRVSKFNTWINQVIAYN 264
                  96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 63.0%
Matches 167; Conservative
                                                                       Matches 247; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chymotrypsinogen 1.
                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS; S01.256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=8255;
```

<u>ښ</u>

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                               HID DE LE LE COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCCO COCO COCCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO COCO CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         190 YWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTR 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70 VVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLAS 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        130 PARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Actinopterygii, Neopterygii, Teleostei, Buteleostei; Neoteleostei,
Acanthomorpha, Acanthopterygii, Percomorpha, Pleuronectiformes;
Pleuronectoidei: Paralichthyidae, Paralichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=PANCREAS;
Suzuki T., Srivastava A.S., Kurokawa T.;
Japanese flounder mRNA for chymotrpsinogen 2.";
Submitted (JUL-1999) to the EMBL/Genbank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                         10 LVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNW
                                                                                     LVTVNQCRQYWG-ARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 805.5; DB 13; Leuser.
Pred. No. 5.7e-64;
----hes 71; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9F583044E22F78C0 CRC64;
                                                                                                                                                                                                                                                                                                                                                              01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                         260 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEMORS; SOLIS2; 1.

MEMORS; SOLIS2; 1.

INTERPRO; IPR001214; Chymotrypsin.

INTERPRO; IPR001254; Ser_protease_Try.

PRINTS; PR00722; CHYMOTRYPSIN.

PROSITE; PS50240; TRYPSIN_DOM; 1.

PROSITE; PS00134; TRYPSIN_DOM; 1.

PROSITE; PS00135; TRYPSIN_SER; 1.

Hydrolase; Serine protease.

SEQUENCE 260 AA; 27793 MW; 9F583044E22F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40; Mismatches
                                                                                                                                                                      NIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                              Chymotrypsinogen 2. Paralichthys olivaceus (Flounder).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRYPSIN FAMILY.
EMBL; AB029754; BAA82366.1; -.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.8%;
ilarity 56.1%;
Conservative 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               246 VTELRAWMDQTIANN 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        250 VSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
es 143; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loca
Matches
                                           119
                                                                                                                                                                           240
                                                                                                                            177
                                                                                                                                                                                                                  237
                                                                                                                                                                                                                                                                             RESULT 6
                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
    ò
                                           셤
                                                                                       ò
                                                                                                                          g
                                                                                                                                                                           ò
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
REALINE—2108560; PubMed=11217851;

REALINE—2108560; PubMed=11217851;

REDLINE—2108560; PubMed=11217851;

RAWAI J., Shinaqawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Aito T., Okazaki Y., Gojobori T., Bono H., Rasukawa T., Salto R.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Greischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Bake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,

RA Sakai H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

RA Wasshisaki Y.,

RA Wasshisaki Y.,

RA Wasshisaki Y.,

RA Wanshav Borits A., Yoshida K., Rasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GGSLISENWVYAAAHCGVKT-TNVVVAGEFDQGSDEENVQVLKIAQVFKNPKFNSFTVRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120 DITLLKLATPAQFSETVSAVCLPTVDDDFPAGTLCATTGWGKTKYNALKTPDKLQQAALP
                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS
TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
SEQUENCE 263 AA; 27821 WW; 2620A27AFBA5D04D CRC64;
                                                                  01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56.2%; Score 797.5; DB 11; 54.9%; Pred. No. 3e-63; 1ive 42; Mismatches 76;
   Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:1913723; 2200008D09Rik.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AK003060; BAB22539.1; -. HSSP; P00766; 1GCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00722; CHYMOTRYPSIN. SMART; SM00020; Tryp_SPc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
PRELIMINARY;
                                                                                                            01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. 2200008D09Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Simhes 145;
```

1;

S

Page

```
09D8X8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09D8X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
                                               ò
                                                                                            g
                                                                                                                                           Qγ
                                                                                                                                                                                      g.
                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-CSTBL/63: TISSUE-STOWACH, SPLEEN, AND PANCREAS;

KEARIN-CSTBL/63: TISSUE-STOWACH, SPLEEN, AND PANCREAS;

KRAWAL J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Eukuda S.,

A Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Salto R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.P., Suzuki R., Tomita M., Wagner L., Washio T.,

Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Rownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Rownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Rodone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Hasashizaki Y.,

Hasashizaki Y.,

Kawashizaki Y.,

Kawashizaki Y.,

Kawashizaki Y.,

Kawashizaki Y.,

Kawashizaki Y.,

Kawashizaki Y.,

Kananada T., Koshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Kananada T., Kawashizaki Y.,

Kawashizaki Y.,

Kananada T., Kamanada T.,

Kananada T., Kawashi T.,

Kananada T., Kawashizaki Y., Kawaji H., Kohtsuki S.,

Kananada T., Kamanada T.,

Kananada T., Kamanada T.,

Kananada T., Kamanada T.,

Kananada T., Kawashizaki Y.,

Kananada T., Kamanada T.,

Kananada T., Kamanada T.,

Kananada T., Kamanada T.,

Kananada T., Kamanada T.,

Kananada                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 11; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56.1%; Score 795.5; DB 11; Length
54.9%; Pred. No. 4.5e-63;
Live 41; Mismatches 77; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27822 MW; 28C4487AF1A26B27 CRC64;
                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                        263 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNKNOWN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:1913723; 2200008D09R1k.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001204; Ser_protease_Try
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNU PROSITE; PS00135; TRYPSIN_EER; 1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                        PRT;
                                                                     241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                  240 TSTPAVYARVTALMPWVQEILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AK008927; BAB25531.1; -.
EMBL; AK007765; BAB22531.1; -.
EMBL; AK007765; BAB25241.1; -.
EMBL; AK007815; BAB25801.1; -.
EMBL; AK008729; BAB25861.1; -.
EMBL; AK00888; BAB25861.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 145; Conservative
                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                        2200008D09R1k protein.
2200008D09R1K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AK007815; BAB2
EMBL; AK008729; BAB2
EMBL; AK008888; BAB2
HSSP; P00766; IGCT
MEROPS; S01.152; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                     09CR35
                                                                                                                                                                                        RESULT 8
                                                                                                                                                                                                                 Q9CR35
                      g
G
                                                                                                                                                                                                                                                            ò
```

MLLESLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60

à

```
MEDINE-STBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/63; TISSUE-PANCREAS;

XRANAWGSTBL/64; TISSUE-PANCREAS;

XRANAWGSTBL/64; TISSUE AND H., Adachi J., Fukuda S., Yamanaka I.,

XRANAWGSTBL/64; ASTDLI T., BONO H., Kasukawa T., Saito R.,

XRANAWGSTBL/64; ASTDLI T., BONO H., Kasukawa T., Saito R.,

XRANAWGSTBL/64; X., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

XRANAWGSTBL/64; X., Suzuli R., Suzuki R., Tomita M., Wagner L., Washio T.,

XRANAWGSTBL/64; AND H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

ROWINSTEIN M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Lyons P., Marchionni L., Mashima J., Mombaerts P.,

Androne P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

XRANAWBOTIS A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

XRANAWBOTISAA, Y., Voshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

XRANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAWGSTBL/ARANAW
                                                        GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                              GGSLISENWVVTAAHCGVKT-TDVVVAGEFDQGSDEENVQVLKIAQVFKNPKFNSFTVRN 119
1 MAFLWLVSCFALVGATFGCGVPAIQPVLTGLSRIVNGEDAIPGSWPWQVSLQDRTGFHFC 60
                                                                                                                                                                                                                                                                                                                   -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL; AK007566; BAB25112.1; -.
HSSP; P00766; 1GCT.
                                                                                                                                                                       121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP
                                                                                                                                                                                                     181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse).
Sukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi,
Mammalla, Eutheria, Rodentia, Sciurognathi, Muridae; Murinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C0638FB8F905A92F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 17, Last sequence update) (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD: MGI:1913723; 220000BD09R1k.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001234; Ser_protease_Try.
Pfan: PF00089; Lrypsin: 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SMO0020; TTYP_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                     240 TSTPAVYARVTALMPWVQEILEAN 263
                                                                                                                                                                                                                                                                                                                                                                                                 241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27898 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hydrolase; Serine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2200008D09Rik protein.
2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P00766; 1GC
MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
```

```
STRAIN-C57BL/63; TISSUE-SPLEEN;

KEDLINE-21085660; PubMed=11217851;

RAWAI J., Shihadawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RAWAI J., Shihadawa A., Shibata K., Xoshino M., Itoh M., Ishii Y.,

A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Radota K., Matsuda H.A., Ashburrar M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburrar M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburrar M., Batalov S., Casavant T.,

Rubil P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

Rawai K., Okido T., Furuno M., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Rubil D., Machioni L., Mashima J., Mazzarelli J., Mombaerts P.,

Rodone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Rysshaw-Boris A., Yoshida K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

Hysshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Rystructional annotation of a full-length mouse cDNA collection.";
190 YWGAR-ITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYT 248
                                                                                                                                      110 HPNWNA-NTMNNDLFLLKLASP-ARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVG 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130 VLGTNVSPVCLGESSDVFAPGMKCVTSGWGLTRYNAPG--TPNKLQQAALPLMSNEECSQ
                                                  RYTAQVSPVCLASTNEALPSGLTCVTTGWG--RISGVGNVTPARLQQVVLPLVTVNQCRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17707 MW; 83791FD829ABEDD6 CRC64;
                                                                                                                                                                                                                                                                                                                                  01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
0910001608Rik protein.
CTRL OR 0910001608RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47.5%; Score 674; DB 11;
82.2%; Pred. No. 1.7e-52;
                                                                                                                                                                                                                                                                                                       164 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:88558; Ctrl.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AK003074; BAB22549:1;
HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hydrolase; Serine protease.
SEQUENCE 164 AA; 17707 M
                                                                                                                                                                                                         ||:: |::| |
RVTELRGWVDQILAAN 263
                                                                                                                                                                                       RVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 82.2
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nature 409:685-690(2001
                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEROPS;
                                                                                                                                                                                                                                                                                                         Q9DC82
                                                                                                                                                                                       249
                   71
                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                        RESULT 11
Q9DC82
                                                                                                                                                    a
                                                                                  g
                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                  ŏ
                                                                                                                     à
                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                        121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                         181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                         GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAHCOVTPGRHFVVLGEYDRS-SNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPA 131
                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 ISAAYGCGSPAIQPQVIGYARIVNGEEAVPHSWPWQVSLQQSNGFHFCGGSLINENWVVT 70
                                                                  1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                     13 LGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

TSUSBE-PRIADRIC CABCA;

MEDLINE-20464314; PubMed-11011764;

Spilliaert R., Gudmundsdottir A.;

"Molecular Cloning of the Atlantic Cod Chymotrypsinogen B.";

Miccol. Comp. Genomics 5:41-50(2000).

-- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 263;
Length 263;
                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHYMOTRYPSIN B. : EF61B18A34EE5E7C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-WAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-WAR-2002 (TrEMBLrel. 20, Last annotation update)
Chymotrypsin B precursor (EC 34.21.1).
DB 11;
   .5;
1.6e-62;
78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 758.5; DB 1 Pred. No. 9.1e-60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam: PF00089; trypsin: 1.
PRINTS: PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC: 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_BER; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
PHOTOLASE; Scrine protease; Signal.
SIGNAL
                                 41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47; Mismatches
 55.7%; Score 789.5; 54.5%; Pred. No. 1.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_fry.
                                                                                                                                                                                                                                                                                                                                                              240 TSTPAVYARVTALMPWVQEILEAN 263
                                                                                                                                                                                                                                                                                                                                         241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRYPSIN FAMILY.
EMBL; AJ242521; CAB43766.1; -.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28175 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cod)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137; Conservative
                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Atlantic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263 AA;
                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gadus morhua
                   Best Local Simi
Matches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                          09PW06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09PW06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                           90MG60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                     ŏ
                                                                                                                                                                    a
                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                    ò
                                                                                                                                                                                                                                                                                                                                          ò
```

;

Gaps

```
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                          Q9D7T9
                                                 118
                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                       ð
                                                                         유
                                                                                                  ð
                                                                                                                        g
                                                                                                                                                   ð
                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                       Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Arawaa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Saito T., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Kuehl P., Lewis S., Matsuo Y., Nikaldo I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Szuki R., Tomita M., Wagner I., Washio T., Sakai K., Okido T., Furuno M., Carninci P., de Bonaldo M.F., Blake J., Boffelli D., Bojunga N., Carnici P., de Bonaldo M.F., Bronstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Nordone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamico N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Winkhaw-Boolis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
NVTPARLQOVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWV 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNANT 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ---DNTGFHF 59
                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 11; Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39.0%; Score 552.5; DB 11; Length 43.1%; Pred. No. 2.2e-41; tive 43; Mismatches 96; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28904 MW; C543F76957B2A7CE CRC64;
                                                                                                                                                                          Created)
Last sequence update)
Last annotation update)
                                                           LIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                         PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS; S01.154; -.
MGD; MGI:1915118; Ela3b.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                   STRAIN-C57BL/6J; TISSUE-TONGUE;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AK010149; BAB26734.1; -. EMBL; AK009129; BAB26092.1; -.
                                                                                                                                                                                                  01-JUN-2002 (TrEMBLrel. 21,
2310074F01R1k protein.
ELA3B OR 2310074F01R1K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 118; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00089; trypsin; 1
                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                        Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P05805; 1FON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             269 AA;
                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hayashizaki Y.;
                                                                                                                                                               Q9CQ52;
01-JUN-2001
                                                                                                                                                                                      01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
                                                                                                                                                  090052
                                  68
                                                          228
                                                                                                                        RESULT 12
Q9CQ52
                                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                 a
                                                           ô
```

```
STRAIN-CSTBL/63; TISSUB-STOWACH;

KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

A Arawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Radio T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Cochiwa H.,

Radota K., Matsudo Y., Nikaido I., Pesole G., Quackenbush J.,

Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

Radota K., Okido T., Furuno M., Anno H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Rousstein M.J., Bult C., Fletcher C., Fullta M., Gariboldi M.,

Rousnetein M.J., Bult C., Fletcher C., Fullta M., Mazarelli J., Mombaerts P.,

Rordone P., Rang B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Rushawa R., Wang K.H., Weitz C., Whittaker C., Wilming L.,

Whynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Nordone P., Kohtsuki S.,
                                            OVVLPLVTVNQCRQ--YWGARITDAMICAGGSGASSCQGDSGGPLVCQKGN-TWVLIGIV 232
                                                                                                                                                                                                                        176 QALLPVVDYEHCSRWNWWGLSVKTTMVCAGGDIQSGCNGDSGGPLNCPADNGTWQVHGVT 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
MN--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38.4%; Score 544.5; DB 11; Length 269; 42.7%; Pred. No. 1.1e-40; ive 43; Mismatches 97; Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28977 MW; 9F43F769DDB2A7CF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                        233 SW-GTKNCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                MGD: MGI:1915118; Ela3b.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001234; Ser_protease_Try.
InterPro; IPR001234; Ser_protease_Try.
InterPro; IPR001252; CHYMOTRYPSIN.
SMART; SW00020; TTYP_SPC; I.
PROSITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AK008858; BAB25932.1; -. HSSP; P05805; 1FON.
MEROPS; S01.154; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2002 (TrEMBLrel. 21,
2310074F01R1k protein.
ELA3B OR 2310074F01R1K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 42.79
Matches 117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
```

à ద à 셤 ò 셤 ò g

ò

```
185 NQCRQ--YWGARITDAMICAGGSG-ASSCQGDSGGPLVCQK-GNTWVLIGIVSWGTK-NC 239
                                                                                                                                                                                                                                                117 NDIALIKLASPVDVSAIITPACVPDAEVLLANGAPCYVTGWGRLWTGGPIADA-LQQALL 175
                                                                                                                                                                                                                                                                                                                                                     65 ISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTL 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Crāniata; Vertebrata; Euteleostomi;
Actinopterygii; Neoperygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
Pleuronectoidei; Paralichthyidae; Paralichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MKLLVFALFVAGAYGCGLPTFPPIVT - - - RVVGGEDVRVHSWPWQASLQYKSGNSFYHTC
                                                             GGSLISPNWVVTAAHCQVTPGRHFVVLGEYD-RSSNAEPVQVLSIARAITHPNWNANTMN
                                                                                                 LKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 LSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FHFCGGSL
                                                                                                                                                                                  NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVL
                                                                                                                                                                                                                                                                                                                 PLVTVNQCRQY - - WGARITDAMICAGGSGA - SSCQGDSGGPLVCQKGN-TWVLIGIVSWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37.0%; Score 524.5; DB 13; Length 260; 40.3%; Pred. No. 6.7e-39; Live 58; Mismatches 84; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Suzuki T., Srivastava A.S., Kurokawa T.;
"Japanese flounder mRNA for elastase 4 precursor.";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-: SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS TRYSIN FAMILY.
EMBL; AB029758; BAA82370.1; --
HSSE; PO0761; 1EPT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260 AA; 27942 MW; 61883CD1BGA66075 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SP: 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Interpro; IPR001314; Chymotrypsin.
Interpro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236 SSMGCNYPKKPSVFTRVSAYIPWINNW 263
                                                                                                                                                                                                                                                                                                                                                                                                                                          TK-NCNI-QAPAMYTRVSKFSTWINQVM 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Elastase 4 (Fragment).
Paralichthys olivaceus (Flounder).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1999 (TrEMBLrel. 12, 01-NOV-1999 (TrEMBLrel. 12, 01-MAR-2002 (TrEMBLrel. 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 40.3
Matches 106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEROPS; S01.155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9W7P9
                                                             61
                                                                                                                        28
                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                          236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SETW BERNER BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY SET BY S
                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                             οχ
                                                                                                                        g
                                                                                                                                                                                         à
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE-96262679; PubMed-8925447;
Gudmundsdottir E., Spilliaert R., Yang Q., Craik C.S., Bjarnason J.B.,
                                                                                                                                                                                                                                                                                 118 MN--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                             60 CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSI--ARAITHPNWNANT 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                           26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gadus morhua (Atlantic cod).
bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                            Gudmundsdottir A.;
"Isolation and characterization of two cDNAs from Atlantic cod encoding two distinct psychrophilic elastases.";
Comp. Biochem. Physiol. 113B:795-801(1996).
-I- CAFALYTIC ACTIVITY: HYDROLYSIS OF PROTEINS, INCLUDING ELASTIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Elastase precursor (EC 3.4.2.137) (Leukocyte elastase) (Lysosomal elastase) (Neutrophil elastase) (Bone marrow serine protease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PREFERENTIAL CLEAVAGE: VAL-|-XAA > ALA-|-XAA.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                   LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ---DNTGFHF
                                                                 117 VSCGNDIALVKLSRSAQLGDAVQLACLPPAGEILPNGAPCYISGWGRLSTNGPL-PDKLQ
                                                                                                                                                                                                                                                                                                                                                                                                             QVVLPLVTVNQCRQ--YWGARITDAMICAGGSGASSCQGDSGGPLVCQKGN-TWVLIGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 37.6%; Score 533.5; DB 13; Length 266; Il Similarity 40.3%; Pred. No. 1.1e-39; 108; Conservative 57; Mismatches 88; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTIVATION PEPTIDE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B786B52C71559E2E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hydrolase; Serine protease; Signal; Zymogen.
SIGNAL 1 15 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         236 SFVSSLGCNTLRKPTVFTRVSAFIDWIEETIANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEROPS, SOI.155; -.
InterPro: IPRO01314; Chymotrypsin.
InterPro: IPRO01214; Ser_protease_Try.
Pfam: PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SMO020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LES; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SW-GTKNCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELASTASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28533 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U56956; AAB58350.1; -. HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             266 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID-8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MEDULLASIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
092077
                                m
```

ô

THE

10;

qq

240 NI-QAPAMYTRVSKFSTWINQVM 261 | : |::|||| : ||| || 235 NYPKRPSVFTRVSAYIPWINNVM 257

ò qq

Search completed: December 20, 2002, 15:18:54 Job time : 33.6957 secs

• .				
÷				
		•		
	. '	·	·	
			•	

```
(without alignments)
864.421 Million cell updates/sec
                                                                                                              December 20, 2002, 15:12:13; Search time 40.6957 Seconds
                                                                                                                                                                                        US-09-856-319B-4
1418
1 MLLLSLTLSLVLLGSSWGCG......AMYTRVSKFSTWINQVMAYN 264
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                               908470 seqs, 133250620 residues
                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                          Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                              Run on:
```

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

908470

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Datab

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Description	Mouse serine prote	Human serine prote	Human pancreatic c	Amino acid sequenc	Bovine chymotrypsi	Human chymotrypsin	Porcine elastase I	Pig pancreas elast	Porcine pancreatic	Tourish and Company
ΩI	AAB11711	AAB11710	AAB54077	AAU82738	AAY99596	AAB98504	AAP61724	AAP70758	AAR29621	23003044
% Query re Match Length DB ID	264 21	21	21	23	21	22	7	80	13	٢
% Query Match L	100.0	89.0	62.7	58.0	54.6	53.3	37.9	37.9	36.9	26.2
Score	1418	1262	889	822.5	774.5	755.5	537	537	523.5	41.5
Result No.	-1	~	m	4	2	9	7	æ	σ	-

	11	500 498	35.	6.1	279		ABG20513 AAP61723		Novel human diagno Human elastase II.
	13	496.5	50 4	9.5	268	7	AAR90683		saldecri
	15	. 78 8	* * *	4.4	811	27	AAR12933		sminogen mut
	77.	999	* * *	i m c	811	- 01 0	AAR12939		Plasminogen mutein
	100	485.5	34.	, ci (	270		AAP70759		Human pancreas ela
	21	ജവ	4 4	70	812	9 6	AAR12943 AAR83959		Plasminogen mutein Complete mouse pla
	22	8 8	4 4	90	812	~ 0	AAW07585		Murine plasminogen
	24	82	4	2	812	0	AAW94036		Murine plasminogen
	5 2 2 8	8 2	4 4	N 0	812		AAB16490		Murine plasminogen
	27	82	4	2 (7)	812	2	AAM50516		Mouse plasminogen.
	58 20	82	4 4	ci c	812	C) a	AAG67229		Amino acid sequenc
	30	485	* *	10	810	n	ABB83470		Human plasminogen.
	31	485	4	~	810	m	ABB75939		Human plasminogen.
	32	7 Z	4 4	<b>~</b> ~	1220	2	AAU32858		Novel human secret
	34	484.5	. 4	1 (2)	273	, -	AAB54243		Human pancreatic c
	35	84	4	~	811	N	AAR12944		Plasminogen mutein
	36	484	4 .	٦,	249	m	ABB81497		Human microplasmin
	3.6	484	4 4		348 437	no	ABBB1498		Human miniplasmino
	36	484	4	!!	546	4	AAR34427		Sequence of tissue
	40	484	4		790	<b>LO</b> 1	AAR60519		Human 'Glu' plasmi
	41	484	34.		790	~ -	AAB36562		Mammalian kringle
	4 4 3 6	484	34		791	-	AAY99589		
	44	484	34	·	791	-	AAY50867		n plasminog
	<b>4</b> .	484	34	-	791	~	AAG67223		Amino acid sequenc
							ALIGNMENTS	IENTS	
į.									
AAB117	11711								į
<u>a</u> :	AAB1171	1 st	andard		Protein	in;	264 AA.		3
Y X	AAB1	11711;							-
×	C	E	•	1	4	3			
ξ×	ກ	-200	_	IIISU	entry	2			
DE	Mouse	serin	a)	protea	se BS	SP5	(mBSSP5)	SEQ ID NO:4.	
X		1	,					6	
	diag epil pros	BSSP5; serine diagnostic man epilepsy; can prostatic hype	ine pro marker cancer; hypertr		all all	s; numan :ibody; !ammatio	n; nBSSP5; transgen1 on; infert	mouse; mBSSP5; c animal; Alzhe ility; pancreat	brain; ilmer's disease; itis;
SO	Mus	sp.							
PN	W020	00031243	-A1						
XX OP	02-0	JUN-2000							
XX					,				
P.Y	19-1	-NOV-1999		0M66	-JP0647	473.			•
PR	20-h	-NOV-1998		98JP	-034780	906.			
PA	(FUSO	) FUS	0	PHARM	IND L	LTD.			
P i	Vemura	н,	Okui	Α,	Kominami	nami	Κ,	Yamaguchi N, Mitsui	S;
2 N N	WPI; N-PS	2000-4 DB; AAA	00058	58/34 34.					
PT	Serine	ine proteases	ease		BSSP5,	useful	in	detecting homologs,	mutants and

98JP-0347806.

19-NOV-1999; 20-NOV-1998;

02-JUN-2000

WO200031243-A1.

(FUSO ) FUSO PHARM IND LTD

```
The invention relates to novel serine proteases designated BSSP5

(AABI1710-B11711), and to nucleic acids encoding them (AAA61733-A61734).

The invention also relates to vectors and transformants comparising BSSP5
nucleic acids; transgenic animals in which the expression level of BSSP5
can be varied; and an mBSSP5 knockout mouse. The invention additionally
encompasses anti-BSSP5 antibodies and methods of production of such
antibodies, methods of BSSP5 detection using the antibodies, and the
use of BSSP5 proteins or fragments as diagnostic markers for certain
medical conditions, e.g., pancreatitis. A method for detecting
ancreatitis comprising measuring BSSP5 concentration in the blood or
urine, and a pancreatitis diagnostic agent containing an anti-BSSP5
urine, and a pancreatitis diagnostic agent containing an anti-BSSP5
curine, and a pancreatitis diagnostic agent containing an anti-BSSP5
curine, and a puncant cDNA library using degenerate PCR primers
(AAA6174-A61745) based on conserved regions of serine proteases. The
BSSP5 serine proteases and nuclectides encoding them are useful in
detecting homologues, mutants and polymorphic variants in biological
samples (e.g., blood, urine, brain, prostate gland, placenta, teetis,
pancreas and spleen) as diagnostic markers for conditions such as
Alzheimer's disease, epilepsy, cancer, inflammation, infertility,
pancreatitis and prostatic hypertrophy. Sequence AAB11711 represents
conditions and propersents
conditions which are used to be buman BSSP5
conditions and sequence AAB11711 represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLTLSLVLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BSSP5; serine protease; human; hBSSP5; mouse; mBSSP5; brain; diagnostic marker; antibody; transgenic animal; Alzheimer's disease; epilepsy; cancer; inflammation; infertility; pancreatitis; prostatic hypertrophy.
polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 1418; DB 21;
100.0%; Pred. No. 7.9e-112;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human serine protease BSSP5 (hBSSP5) SEQ ID NO:2.
                                                                                              Claim 3; Page 55-56; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB11710 standard; Protein; 264 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB11710;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (mBSSP5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB11710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
The invention relates to note; setting proceases designated bases of Ambili10, and to nucleic acids encoding them (AAA61733-A61734).

The invention also relates to vectors and transformants comprising BSSP5 cancelled acids; transgenic animals in which the expression level of BSSP5 can be varied; and an mBSSP5 knockout mouse. The invention additionally encompasses anti-BSSP5 antibodies and methods of production of such antibodies, methods of BSSP5 detection using the antibodies, and the use of BSSP5 proteins or fragments as diagnostic markers for certain medical conditions, e.g., pancreatitis. A method for detecting proteins or urine, and a pancreatitis diagnostic agent containing an anti-BSSP5 antibody is also disclosed. Nucleotides encoding BSSP5 were initially isolated in a human brain construct regions of serine proteases. The BSSP5 antibody is also disclosed. Nucleotides encoding them are useful in the BSSP5 serine proteases and nucleotides encoding them are useful in detecting homologues, mutants and polymorphic variants in biological samples (e.g., blood, unine, brain, prostate gland, placenta, teetis, pancreas and spleen) as diagnostic markers for conditions such as Alzheimer's adisease, epilepsy, cancer, inflammation, infertility, pancreasitis and prostatic hypertrophy. Sequence AAB11710 represents murine BSSP5 (hBSSP5), and sequence AAB11711 represents murine BSSP5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 HILLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GGSLISQSWVYTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN
                                                                                                                                                                                                                                                                                                                 Serine proteases BSSP5, useful in detecting homologs, mutants and polymorphic variants as markers for diagnosis of e.g. Alzheiner's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to novel serine proteases designated BSSP5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                             Mitsui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 89.0%; Score 1262; DB 21; Best Local Similarity 86.0%; Pred. No. 1.2e-98; Matches 227; Conservative 25; Mismatches 12;
                                                                                                                                                                                                             Yamaguchi N,
                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 51-52; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kominami K,
                                                                                                                                                                                                                                                     WPI; 2000-400058/34
                                                                                                                                                                                                             Uemura H, Okui A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       264 AA;
                                                                                                                                                                                                                                                                             N-PSDB; AAA61733.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (mBSSP5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

ö

RESULT 3

Homo sapiens

ISPNWVVTAAHCOVTPGRHFVVLGEYDRSSNAEPVOVLSIARAITHPNWNANTMNNDLTL

```
a
                                                                                                                                                ò
                                                                                                                                                                                    g
                                                                         ò
                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; itssue identification; tissue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAC98773 to AAC99231 encode the human pancreatic cancer associated
                                                                                                                              Human pancreatic cancer antigen protein sequence SEQ ID NO:529.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62.7%; Score 889; DB 21; Length 192; 84.7%; Pred. No. 2.5e-67; ive 19; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 966; 1379pp; English.
               AAB54077 standard; Protein; 192 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                      08-MAR-2000; 2000WO-US05989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0124270.
                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-579444/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAC98842
                                                                                                                                                                                                                                                                                                                                                          WO200055320-A1
                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-MAR-1999;
                                                                                         09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                21-SEP-2000.
                                                     AAB54077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
AAB54077
```

```
The present invention relates to the isolation of novel human proteases, and the nucleic acids encoding them. The sequences of proteases, and the nucleic acids encoding them. The sequences of the invention are useful for treating diseases and disorders such as cancers (e.g. breast, colon, lung), immune-related diseases and disorders (e.g. inflammatory diseases and asthma), cardiovascular diseases (e.g. inflammatory disorders (e.g. tastenosis and coronary thrombosis), brain or neuronal-associated diseases, metabolic disorders (e.g. disorders), central or caroparances (e.g. themmatory arthritis and postasis), central or peripheral nervous system diseases, migraines, pain, sexual dysfunction, mood disorders, attention disorders, neurological disorders, hypotension, pypothotic disorders, neurological disorders, hypotension, pypothotic disorders, neurological disorders (e.g. Alzheimer's disease, Parkinson's disease) and dyskinesias.

The nucleic acids and polypeptides are also useful for treating viral infections caused by human immunodeficiency virus (HIV), and non-viral infections such as ocular disease (e.g. glaucoma) and macular checked in the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; protease; cancer; immune-related disorder; cardiovascular disease; neuronal-associated disease; metabolic disorder; inflammatory disorder; nervous system disorder; sexual dysfunction; palh; mood disorder; hypertension; psychotic disorder; neurological disorder; dyskinesia; viral infection; human immunodeficiency virus; HIV; non-viral infection; ocular disease; cytostatic; enzyme.
Nucleic acids encoding novel human proteases, useful for useful for treating diseases and disorders such as cancers, immune-related diseases and disorders, cardiovascular disease (e.g. restenosis) and inflammatory disorders
                                                                            LKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenepeel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amino acid sequence of novel human protease #37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Manning G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sudarsanam S,
                                                                                                                                                                                                                                                                                                                                                                       AAU82738 standard; Protein; 263 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Fig 2M; 313pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUN-2001; 2001WO-US20171.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-JUN-2000; 2000US-214047P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Whyte D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-139913/18.
N-PSDB; ABK31780.
                                                                                                                                                                                  185 NOCROYWGA 193
                                                                                                                                                                                                                    NOCROYWGS 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200200860-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plowman G, W.
Charydczak G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                AAU82738;
                                                                                                                                                                                                                                     181
                   61
                                                                         125
                                                                                                                               121
                                                                                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                                                                                                                                                                                                                              AAU82738
```

ö

Gaps

SLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSL 64

Conservative

al Similarity 160; Conserv

Local Best Loca Matches

'n

ò g

g

ద ò g à g à a ò g

```
QTLAAN 245
                                                                                                                                                                                                                                                                                                                                                                                             QVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ovarian cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200129056-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYAR-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-0CT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O'Brien TJ,
                                                                                             Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB98504;
                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human;
                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                              259
                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB98504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888888888
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Polypeptide with plasminogen activator activity useful as thrombolytic agent for treating blood clot disorders e.g. heart attack, comprises 10 amino acid peptide fragment for recognition or activation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is bovine chymotrypsinogen. It was included in a review of sequence homologies of several plasminogen activators. Plasminogen is the principal serine protease zymogen in the extracellular fluids of vertebrates. Its active form, plasmin, is implicated in pericellular proteolysis associated with a wide range of physiological and pathological processes. Plasminogen expression is regulated by plasminogen activators which hydrolyse a peptide bond in plasminogen to convert it to plasmin or form tight binding complexes with plasminogen to spontaneously convert it to plasmin. The sequence homology analysis has identified a six amino acid peptide involved in
                                                                                                                                                    181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGIVSWGTKNCN 240
                                                                                                                                    GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                      Gaps
                                                                                                         9
                                                                               9
                                                                                             DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP
                                                                                                                                                                                                          MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC
                                                    ä
                           Length 263;
                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cardiant; thrombolytic;
                         23;
                            ..5e-61;
73;
                           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      heart attack; stroke; blood clotting disorder
                                                      Mismatches
                         Score 822.5;
Pred. No. 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 35-36; 41pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (OKLA-) OKLAHOMA MEDICAL RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                AA.
                                                                                                                                                                                                                                                                                                   241 IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                             240 TTTPAVYARVTKLIPWVQKILAAN 263
                                                                                                                                                                                                                                                                                                                                                                                              AAY99596 standard; protein; 245
                                                    39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plasminogen activator;
                           58.0%;
57.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tang JJN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0110588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US09991
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bovine chymotrypsinogen A.
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-422975/36
                                       Similarity
 263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang XC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200032759-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plasminogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bos taurus
                                                      151;
                                                                                                                                                                                                                                                                                                                                                                                                                           AAY99596;
 Sequence
                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bovine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lin X,
                                                      Matches
                                                                                                                                     61
                                                                                                                                                               61
                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                   AAY99596
```

```
ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           įs
plasminogen activation. This peptide is particularly useful when inserted between amino acid residues 644 and 645 of full length human plasminogen. Novel plasminogen activators have been made based upon the plasminogen activation/recognition site of plasminogen binding proteins. The polypeptides are useful in preparing thrombolytic agents for treating blood clotting disorders such as heart attack.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to human tumour antigen-derived gene 15 (TADG-15) protein and coding sequence (see AAH23601 and AAB98500). TADG-15 is an extracellular serine protease. It was found that TADG-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel extracellular serine protease, termed tumor antigen-derived gene 15 protein overexpressed in carcinomas and DNA encoding it, for diagnosis, treatment, prevention of cancer, particularly breast,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79 TPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTS-DVVVAGEFDQGSSSEKIQKLKIAKVFKNSKYNSLTINNDITLLKLSTAASFSQTVS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139 PVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDA 198
                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                      78
                                                                                                                                                                                                                                                                                                                                                                         19 CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQV
                                                                                                                                                                                                                                                                                                                                                                                                      1 CGVPAIQPVLSGLSRIVNGEEAVPGSWPWQVSLQDKTGFHFCGGSLINENWVVTAAHCGV
                                                                                                                                                                                                                                                                                                                  ;;
                                                                                                                                                                                                                                                        Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TADG-15; cytostatic; vaccine; ovarian tumour; cancer; antigen-derived gene 15; serine protease; chymotrypsin.
                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human chymotrypsin serine protease catalytic domain.
                                                                                                                                                                                                                                                           DB 21;
                                                                                                                                                                                                                                                                                                                  72;
                                                                                                                                                                                                                                                        Score 774.5; DB :
Pred. No. 1.6e-57
                                                                                                                                                                                                                                       54 68; Scur.
57.38; Pred. No. 1..
1... 32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 10; Fig 1; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB98504 standard; Protein; 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0421213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-OCT-2000; 2000WO-US29095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                           Best Local Similarry Journal Matches 141; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ĥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tanimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-381031/40.
                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                       245 AA;
```

S

```
59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                    2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expression system. The product is useful in rejuvenating the elasticity of the arterial wall, and improving unusual serum lipid levels and lipoprotein metabolism.
                 119 N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ
                                                                                                                      VVLPLVTVNQCRQ--YWGARITDAMICAGGSG-ASSCQGDSGGPLVCQKGN-TWVLIGIV
     2 LLLSLTLSLYLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pancreas elastase prodn. used to improve lipoprotein metabolism -
comprises isolating RNA coding elastase, synthesising single and
double chain cDNA and introducing recombinant into host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence encoding pancreas elastase may be used to transform an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37.9%; Score 537; DB 8; Length 269;
43.1%; Pred. No. 2e-37;
tive 48; Mismatches 92; Indels
                                                                                                                                                                                                            SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                          |:|: || |::|||| |:::||||| : ||| |:| || SFGSSLGCNYYHKPSVFTRVSNYIDWINSVIANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
2..16
/note= "May be absent"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 480; 18pp; Japanese.
                                                                                                                                                                                                                                                                                                       Ā
                                                                                                                                                                                                                                                                                                    AAP70758 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                          Lipoprotein metabolism; lipid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85JP-0138494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                 pancreas elastase-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1987-040875/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SANY ) SANKYO KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAN71121.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP62000276-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                         19-APR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-JAN-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Sim
Matches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sus scrofa.
                                                                                                                                                                                                                                                                                                                              AAP70758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                  176
                                                                                                                                                                                                            233
                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                 Pig
                            g
                                                                             g
                                                                                                                               g
                                                                                                                                                                                  엄
                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                   q
                                                     ò
                                                                                                      ò
                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                              ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
over-expressed in ovarian tumours. TADG-15 protein or its fragments of 9-20 residues that lack TADG-15 protease activity are useful for vaccinating an individual against TADG-15, having, suspected of having or at risk of getting cancer. Furthermore, the TADG-15 gene can be used as a diagnostic or therapeutic target in cancer. The present sequence was used in a sequence homology alignment with the catalytic domain of TADG-15.
                                                                                                                                                                                                                                    SSNAEPVQVLSIARAITHPNWNANTMNNDLTLLKLASPARYTAQVSPVCLASTNEALPSG 152
                                                                                                                                                                                                                                                                         153 LTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQYWGARITDAMICAGGSGASSCQG 212
                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                  The porcine elastase product may be efficiently expressed from a transformed host such as collibacillus or yeast, yielding the product more efficiently than spleen extraction. See also J61192288.
                                                                                                                                                                     RIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDR 92
                                                                                                                                              ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                   Length 231;
                                                                                                                                                                                                                                                                                                                                           DSGGPLVCQKGNTWVLIGIVSWGTKNCNIQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biological prepn. of pig elastase II - using DNA with base sequence coding for specified aminoacid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37.9%; Score 537; DB 7; Length 26
43.1%; Pred. No. 2e-37;
:1ve 48; Mismatches 92; Indels
                                                                                                                                              61; Indels
                                                                                                                DB 22;
                                                                                                               53.3%; Score 755.5; DB 2
58.2%; Pred. No. 5.8e-56;
11ve 35; Mismatches 61
                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                    AAP61724 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Fig 1; 11pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85JP-0034050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85JP-0034050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 43.1
Matches 118; Conservative
                                                                                                                                             135; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KIRI ) KIRIN BREWERY KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Porcine elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Colibacillus; yeast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        API; 1986-262895/40.
                                                                                                                               Similarity
                                                                                        231 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAN60919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JP61192289-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-AUG-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sus scrofa.
                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP61724;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                  Query Match
Best Local
                                                                                                                                          Matches
                                                                                                                                                                     33
                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                            213
                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                         AAP617;
  888888888
                                                                                                                                                                                             윱
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                               음
                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

1

16;

Q

59

ò 셤 ò g ò g ò g

119

177

AAR2962

```
190 YWGARITDAMICAGGSGASSCQGDSGGPLVCQKGN-TWVLIGIVSW-GTKNCN-IQAPAM 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           177 VVLPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The genetically engineered prod. can eliminate the dependency on human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               - obtd
                                                                                                                                                                                                                                                 Sequence of human pancreatic elastase IIA encoded on pH2E2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ouery Match 36.3%; Score 515; DB 7; Length 26 Best Local Similarity 41.6%; Pred. No. 1.4e-35; Matches 114; Conservative 47; Mismatches 97; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ohmine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New genetically engineered human pancreatic elastase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eurukawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             using hosts modified DNA coding for enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kawashima I,
                                                                                                                                                                                                                                                                            Enzyme; serum lipoprotein metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example; Page 14-15; 45pp; English.
                                                                                                                                                            Š
                                                                                                                                                           AAP60062 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                                                    85JP-0072308.
85JP-0091986.
85JP-0163964.
85JP-0271128.
                                                                                                                                                                                                                                                                                                                                                                                           86EP-0302557
                                                                                                                                                                                                                                                                                                                                                                                                                        85JP-0236686
                                                                                                                                                                                                                    (first entry)
                                                       247 YTRVSKFSTWINGVMA 262
                                                                         :|| | | | :::|
FTRTSAFIDWIEEIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Takiguchi Y, Tani T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1986-280300/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SANY ) SANKYO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAN60076.
                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                           07-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                       05-APR-1985;
27-APR-1985;
                                                                                                                                                                                                                    06-SEP-1991
                                                                                                                                                                                                                                                                                                                                                             22-OCT-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-JUL-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-DEC-1985;
                                                                                                                                                                                                                                                                                                                                  EP198645-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ohsumi J;
                                                                                                                                                                                       AAP60062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                    236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119.
                                                                                                                                          AAP60062
                           g
                                                         ŏ
                                                                                    g
                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CQVTPGRHFVVLGEYDRSSNAEPVQVLSI -- ARAITHPNWNANTMN -- NDLTLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56
                                                                                                                                                                                                                                                                                                                                                                                          swine; bile acid; gall bladder; bile acid secretion promoters;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents porcine pancreatic elastase III. It was expressed in E. coli YA21 using the expression vector pELE001. It may be used in bile acid secretion promoters and liver function
            | :| | : :||: :||: ||||||| | | ||||||| | | | : :|||
176 GQLLVVDYATCSKPGWWGSTVKTNMICAGGDGIISSCNGDSGGPLNCQGANGQWQVHGIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ-DNTGF--HFCGGSLISPNWVVTAAH
                                                      N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pig pancreas elastase protein - used in bile acid secretion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..5e-36;
86;
                                                                                                                                                                                         |:|: || |::|||| |:236.SYGCNYYHKPSVFTRVSNYIDWINSVIANN 269
                                                                                                                                                                        SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36.9%; Score 523.5; ilarity 43.0%; Pred. No. 2.5e Conservative 43; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        promoters and liver function improvers
                                                                                                                                                                                                                                                                             Ā
                                                                                                                                                                                                                                                                                                                                                               Porcine pancreatic elastase III.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 8; 10pp; Japanese.
                                                                                                                                                                                                                                                                         AAR29621 standard; Protein; 253
                                                                                                                                                                                                                                                                                                                                                                                                         liver function improvers; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91JP-0092069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91JP-0092069
                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SANY ) SANKYO CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sus scrofa domestica,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1992-428826/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 110; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       253 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAQ31724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP04325090-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-1991;
                                                                                                                                                                                                                                                                                                                                  30-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           improvers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                       AAR29621;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
```

10;

28

19

à g à g õ g

92

57

ò g

```
N--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQ 176
                                                                                                                                                                     The human elastase product may be efficiently expressed from a transformed host such as collibacillus or yeast, yielding the product more efficiently than spleen extraction. See also J61192289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59 FCGGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTM 118
                                                             FCGGSLISPNWVVTAAHC-----QVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHP 111
                                                                                                                                            NWNANTMN--NDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNV 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170 TPARLQQVVLPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGNT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biologically producing human elastase ii – using DNA chain with biological prodn. capability for human elastase II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99; Indels
                                                                                                                                                                                                                                                                                                                                       239 WQVHGIVSFGSRLGCNYYHKPSVFTRVSNYIDWINSVIAYN 279
                                                                                                                                                                                                                                                                                                                 WVLIGIVSWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35.1%; Score 498; DB 7; 41.2%; Pred. No. 3.9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Fig 1-2; 19pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP61723 standard; Protein; 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85JP-0034049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85JP-0034049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 113; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Х
Ж
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (KIRI ) KIRIN BREWERY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -:
-:
-:
-:
-:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1986-262894/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Colibacillus; yeast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human elastase II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAN60706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP61192288-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-FEB-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-AUG-1986.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAP61723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local 9
                                                         59
                                                                                                                                            112
                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAP61723
                                                                                                음
                                                                                                                                          ò
                                                                                                                                                                                  g
                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                   a,
                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations in responsible for genetic disorders or other traits to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 LLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                   Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35.3%; Score 500; DB 22; Length 279; 39.9%; Pred. No. 2.7e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96;
                                       236 SFGSRLGCNYYHKPSVFTRVSNYIDWINSVIANN 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45; Mismatches
               SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 20; SEQ ID No 50872; 103pp; English.
                                                                                                                                                                                                                                                                                         Novel human diagnostic protein #20504.
                                                                                                                                                                Ā
                                                                                                                                                              ABG20513 standard; Protein; 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 39.9%
Matches 112; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-639362/73.
N-PSDB; AAS84700.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  279 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                blodiversity
                                                                                                                                                                                                                                               13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2001
                                                                                                                                                                                                      ABG20513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
               233
```

10;

Gaps

16;

õ

```
59 CGGTLIASNFVLTAAAHCISNTXTYRVAVGKNNLEVEDEEGSLFVGVDTIHVHKRWNALLL 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | : : | | | :: | | | :: | CISSSRTYRVGLGRHNLYVAESGSLAVSVSKIVVHKDWNSNQISKGNDIALLKLANPVSL 117
                                                                                                               179 LPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIVSW 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76 CQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMN--NDLTLLKLASPARY 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19 CGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTG---FHFCGGSLISPNWVVTAAH 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119 NNDLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The genetically engineered prod. can eliminate the dependency on human pancreas supplies for the elastase, and avoids antibody formation and possibility of anaphylaxis using porcine elastase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 34.7%; Score 492; DB 7; Length 252; Best Local Similarity 42.4%; Pred. No. 1.2e-33; Matches 109; Conservative 41; Mismatches 91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ohmine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human pancreatic elastase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eurukawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New genetically engineered human pancreationsing hosts modified DNA coding for enzyme
                                                                                                                                                                                                                                                                                                                                                                                      IIA.
                                                                                                                                                                                              235 GT-KNCNI-QAPAMYTRVSKFSTWINQVM 261
                                                                                                                                                                                                                                                                                                                                                                                      Sequence of human pancreatic elastase
                                                                                                                                                                                                                                                                                                                                                                                                                     Enzyme; serum lipoprotein metabolism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kawashima I,
                                                                                                                                                                                                                                                                                           Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Page 3-4; 45pp; English.
                                                                                                                                                                                                                                                                                        AAP60058 standard; Protein; 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85JP-0236686.
85JP-0072308.
85JP-0091986.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86EP-0302557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85JP-0163964
85JP-0271128
                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tani T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1986-280300/43.
N-PSDB; AAN60072.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SANY ) SANKYO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Takiguchi Y,
Ohsumi J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-APR-1985;
27-APR-1985;
26-JUL-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-APR-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-DEC-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-0CT-1986
                                                                                                                                                                                                                                                                                                                                                      06-SEP-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-OCT-1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP198645-A.
                                                                                                                                                                                                                                                                                                                         AAP60058;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                         AAP60058
ID AAP6
                                                  à
                                                                              a
                                                                                                             ò
                                                                                                                                             ద
                                                                                                                                                                             ò
                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGRLQTNGAV-PDVLQQ 175
                                177 VVLPLVTVNQCRQ--YWGARITDAMICAGGSGA-SSCQGDSGGPLVCQKGNTWVLI-GIV 232
                                                 60 CGGSLISPNWVVTAAHCQVTPGRHFVVLGEYD-RSSNAEPVQVLSIARAITHPNWNANTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - for produ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human caldecrin preprosequence is encoded by AAT15536. Expression vectors contg. the DNA can be used for the recombinant production of caldecrin from transformant host cells. The caldecrin is used as a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 LLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQ---DNTGFHF 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35.0%; Score 496.5; DB 17; Length 268; 40.1%; Pred. No. 5.2e-34; Live 46; Mismatches 102; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding rat and human caldecrin and related vectors of caldecrin for use as serum calcium lowering agent
                                                                                                                                                                                                                                                                                                                                   human; calcium serum lowering agent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tomomura A;
                                                                                                                 SWGTK-NCN-IQAPAMYTRVSKFSTWINQVMAYN 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                 'label pre-pro-sequence
                                                                                                                                                                                                                                                                                                                                                     recombinant production; preprosequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'label= mature_protein
                                                                                                                                                                                                                                                                                                     Human caldecrin contg. preprosequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pro-sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 26-27; 43pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                         AAR90683 standard; Protein; 268 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saheki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          serum calcium lowering agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= Trp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95WO-JP01268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95JP-0074676.
                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (CHUS ) CHUGAI SEIYAKU KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 40.1 nes 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                16..29
/label- F
30..268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Akiyama M, Noikura T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1996-068871/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAT15536
                                                                                                                                                                                                                                                                                                                                        rat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24 - JUN - 1994;
                                                                                                                                                                                                                                                                        11-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9600287-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-JAN-1996
                                                                                                                                                                                                                                                                                                                                      caldecrin;
```

Rattus sp.

Key Peptide Peptide Protein

AAR90683;

AAR9068

233

a ò 셤

å

셤

10;

16;

Sequence

Query Match

Matches

g ò

à

ö

- obtd.

Ë

```
7;
               RYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQY- 190
                                                              TAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLPLVTVNQCRQ--YW 191
                                                GARITDAMICAGGSGA-SSCQGDSGGPLVCQKGN-TWVLIGIVSWGTK-NCN-IQAPAMY 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34.4%; Score 487.5; DB 12; Length 811;
40.9%; Pred. No. 1.1e-32;
tive 31; Mismatches 104; Indels 17; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 SWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFCGGSLISPNWVVTAAH 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This protein is a plasminogen mutant cleavable by Factor Xa. Activation is localised to the thrombus because cleavage to plasmin is by an enzyme of the blood clotting pathway. Compositions comprising the mutant plasminogen are used for treatment or prevention of thrombosis, etc. See AAQ12543-Q12558.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Activatable fibrinolytic and antithrombic proteins - activated e.g. factor {\tt Xa},\ {\tt thrombin} or activated protein {\tt C}
                                                                                                                                                                                                                                                         Plasminogen mutein X1 with factor Xa cleavage site.
                                                                                                                                                                                                                                                                                 protease; fibrinolysis; blood clotting; thrombosis
                                                                                                                                                                                                                                                                                                        Location/Qualifiers
578..581
/label= Factor Xa cleavage site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 7; Fig 2 and Fig 4; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dawson KM, Edwards RM, Forman JM;
                                                                                                                                                                                  AAR12933 standard; Protein; 811 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                               89GB-0027722.
90WO-GB01911.
                                                                                                                                                                                                                                                                                                                                                                                                       90WO-G001912
                                                                                                            236 TRVSNYIDWINSVIANN 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BRBI-) BRIT BIO-TECHN LTD
                                                                                              248 TRVSKFSTWINDVMAYN 264
                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 40.9 Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1991-208145/28.
N-PSDB; AAQ12542.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     811 AA;
                                                                                                                                                                                                                                                                                                                      Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                       07-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                              07-DEC-1989;
07-DEC-1990;
                                                                                                                                                                                                                                  23-SEP-1991
                                                                                                                                                                                                                                                                                                                                                        WO9109118-A.
                                                                                                                                                                                                                                                                                                                                                                               27-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence
                                                                                                                                                                                                          AAR12933;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                           RESULT 15
                                                                                                                                                                      AAR12933
                                                                                         à
                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                      g
                                                à
                                                                     a
                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
```

Search completed: December 20, 2002, 15:16:41 Job time : 42.6957 secs

. 人 歌的女子 不是 如果 

```
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
```

OM protein - protein search, using sw model

December 20, 2002, 15:16:49; Search time 7 30435 Seconds (without alignments) 530.147 Million cell updates/sec Run on:

US-09-856-319B-2_COPY_1_231 1221 1 MLLLSLTLSLVLLGSSWGCG......GDSGGPLVCQKGNTWVLIGI 231 Title: Perfect score: Sequence:

Scoring table:

106657 seqs, 16763532 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched:

106657

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

		æ				
Result No.	Score	Query Match	Query Match Length DB	DB	ID	Description
1	966	81.6	192	10	US-09-925-297-529	Sequence 529, App
7	684.5	56.1	263	10	US-09-888-615-96	
e	427.5	35.0	269	10	US-09-925-297-576	Sequence 576, App
4	420.5	34.4		10	US-09-923-779-152	Sequence 152, App
5	420.5	34.4		10	US-09-925-297-695	Sequence 695, App
9	410.5	33.6		10	US-09-948-094-2	
7	408.5	33.5		6	US-09-978-295A-69	Sequence 69, Appl
80	408.5	33.5		6	69-269-826-60-SD	Sequence 69, Appl
6	408.5	33.5		6	US-09-978-192A-69	Sequence 69, Appl
10	408.5	33.5		12	US-10-052-586-64	Sequence 64, Appl
11	408	33.4		10	US-09-925-301-1017	Sequence 1017, Ap
12	408	33.4		10	US-09-804-156-16	Sequence 16, Appl
13	408	33.4		10	US-09-946-633-8	Sequence 8, Appli
14	408	33.4		10	US-09-888-615-103	Sequence 103, App
15	397	32.5		σ	US-09-967-386-1	Sequence 1, Appli
16	397	32.5		10	US-09-946-893-2	Sequence 2, Appli
17	389.5	31.9		6	US-09-335-325-1	Sequence 1, Appli
18	389.5	31.9		10	US-09-788-142-1	Sequence 1, Appli
19	389.5	31.9		10	US-09-761-120-1	Segmence 1. Appli

81, Appl 643, App 15, Appl 934, App 934, App 934, App 932, App 932, App 932, App 102, Appl 102, Appl 103, Appl 103, Appl 5, Appl 4, Appl 6, Appl 6, Appl 6, Appl 6, Appl 7, Appl 895, Appl 895, Appl 101, Appl 101, Appl 101, Appl 102, Appl 103, Appl 104, Appl 104, Appl 105, Appl 106, Appl 107, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl 108, Appl		Gaps 0; L 64	, , ,	v 184
Sequence 613, App Sequence 6, App11 Sequence 15, App Sequence 934, App Sequence 934, App Sequence 932, App Sequence 932, App Sequence 932, App Sequence 932, App Sequence 102, App Sequence 102, App Sequence 103, App Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 6, App11 Sequence 185, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895, App Sequence 895,	ଅ	192; s 0; SGEHECGGS [	SQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTL 	LKLASPAQYTTRISPVCLASSNEALFECLTCYTGWGRLSGVGNVTPAHLQOVALPLVTV [
11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	and Antibodi	10; Length -83; 1; Indela GSWPWQVSLQDS; [	SVSRAITHPSW	SGVGNVTPAF              SGVGNVTPAF
US-09-873-676-81 US-09-925-297-643 US-09-925-297-643 US-09-828-975-6 US-09-759-143-934 US-09-759-143-934 US-09-759-143-934 US-09-822-87-934 US-09-759-143-932 US-09-780-669-932 US-09-981-759-101 US-09-981-721-5 US-09-961-721-5 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-961-721-6 US-09-97-789-144	MENTS oteins 297 189	e 996; DB . No. 8.4e ismatches RIVNGENAVIA	SSNAEPLQVLS	LTCVTTGWGRI               LTCVTTGWGRI
	ALIG US/09925297 Lic Acids, P. Lic Acids, P. RR: US/09/92: 11-08-10 PCT/US00/00 13-08-12	Score Fred. 1  D: Miss  Miss  PALSFSORI	VLGEYDR         VLGEYDR	NEALTEG
811425888884444469999999999999999999999999999	tion US/ 659A1 al. Nucleic 5 NUMBER: NUMBER: 0999-03-1 : 928 er: 2.0	81.68 99.58 vative GCGIPAIK	VSPGRHEV 	SPVCLASS 
	RESULT 1  19.09-925-297-529  19.09-925-297-529  19.09-925-297-529  19.09-925-297-529  19.09-925-297-529  19.09-925-297-529  19.09-925-297-529  20.09-925-297-529  20.09-925-297-529  20.09-925-297-529  20.09-925-297-529  20.09-925-297-529  20.09-925-297-529	81.6% Similarity 99.5% 89; Conservative TLSLVLLGSSWGCGIPAIK	WTAAHCN WTAAHCN	LKLASPAQYTTRIS
3889.5 3881.5 3882 3882 3793 3709 3709 3709 3709 3709 3709 3709	5-297-55 Ce 529, No. US; L INFORM COF INVI OF INVI REFEREN APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APPLICA APP	Match ocal Sin s 189; S SLTLS	H - H	1 2 1 2
22020202020202020202020202020202020202	RESULT 1 US-09-928 Sequent Patent GENERAL APPLICE TITLE FILE FOURER PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWAN SOFTWA	Ouery Match Best Local S Matches 189  Oy 5 SLTI	<b>0</b> 0	Oy 12 Db 12 Oy 18 Db 18
		0 6		0 0 0 0

```
NAME/KEY: SITE
LOCATION: (234)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
US-09-923-779-152
                                                                                                                                                    US-09-925-297-576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-923-779-152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174
                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                      рp
                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE LOCATION: (167)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GGSLISEDWVVTAAHCGVRTS-DVVVAGEFDQGSDEENIQVLKIAKVFKNPKFSILIVNN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 576, Application US/09925297
Fatent No. US20020081659A1
GENERAL INCOMMINON:
APPLICANT: ROSEN = t al.
FILE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REPRENCE: PA105
CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match 56.1%; Score 684.5; DB 10; Best Local Similarity 55.0%; Pred. No. 1.4e-54; Matches 127; Conservative 36; Mismatches 67;
                                                                                      APPLICANT: WHYTE, DAVID
APPLICANT: CARNEPEEL, SEAN
APPLICANT: CHARVEDCZAK, GLEN
APPLICANT: MANNING, GERARD
APPLICANT: SUDARSANAM, SUCHA
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: US/09/88,615
CURRENT FILING DATE: 2001-06-26
PRIOR APPLICATION NUMBER: 60/214,047
PRIOR FILING DATE: 2000-06-26
PRIOR FILING DATE: 2000-06-26
NUMBER OF SED ID NOS: 150
SOFTWARE: PALENTIN VEY. 2.1
                 Sequence 96, Application US/09888615
Patent No. US20020064856A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 928
SOFTWARE: PatentIn Ver. 2.0
                                                                           APPLICANT: PLOWMAN, GREGORY
                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens US-09-888-615-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-09-925-297-576
JS-09-888-615-96
                                                                                                                                                                                                                                                                                                                                       ID NO 96
ENGTH: 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 576
LENGTH: 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
                        NAME/KEY: SITE
LOCATION: (213)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: SITE
LOCATION: (220)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                 OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGXLQTNGAV-PDVLQQ 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAH 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LQQVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HFCGGSLISQSWVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVS--RAITHPSWNS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116 SCVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNKTPCYITGWGRLYTNGPL-PDK 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175 LQQARLPVVDYKHCSRWNWWGSTVKKTMVCAGGYIRSGCNGDSGGPLNCPTEDGGWQVHG 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 MLRLLSSLLLVAVASGYG-----PPSSHSSSRVVHGEDAVPYSWPWQVSLQYEKSGSFY 55
                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 LLLSLTLSLYLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 17;
                                                                                                                                                                                                                                                                                                                                                                                                                13;
                                                                                                                                                                                                                                                                                                                                                   35.0%; Score 427.5; DB 10; Length 269; 43.9%; Pred. No. 2.1e-31; Live 26; Mismatches 89; Indels 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 152, Application US/09923779
Patent No. US20020076721A1
GENERAL INFORMATION:
APPLICANT: Eyle, Kuth A.
APPLICANT: Eyle, Kalos, Michael D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY TITLE OF INVENTION: AND DIAGNOSIS OF PANCREATIC CANCER FILE REFERENCE: 210121.553
CURRENT APPLICATION UNBER: US/09/923,779
CURRENT FILING DATE: 2001-08-06
NUMBER OF SEQ ID NOS: 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQ 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 420.5; DB Pred. No. 9.1e-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 34.4%; Score 420.5; I
Best Local Similarity 40.7%; Pred. No. 9.1e<sup>-</sup>
Matches 98; Conservative 35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 152
                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 43.9%
Matches 100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
US-09-978-295A-69
                                                SEQ ID NO 2
LENGTH: 343
                                                                                                                       US-09-948-094-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                     112
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                    DĐ.
                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
LOCATION: (28)
COTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
LOCATION: (34)
COTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-925-97-695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58 HFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVS--RAITHPSWNS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116 TTM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAH 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 SCVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNKTPCYITGWGRLYTNGPL-PDK 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34.4%; Score 420.5; DB.10; Lengum 27.7,
40.7%; Pred. No. 9.2e-31;
- "Mamatches 92; Indels 17; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LQQVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLTLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09948094
Patent No. US20020090625A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: The Brigham and Women's Hospital, Inc.
APPLICANT: Work, Samuel
APPLICANT: Wong, Kwong-kwok
TITLE OF INVENTION: Methods of Detecting Cancer Based on Prostasin
FILE REFERENCE: 81994/282423
                                                                                                                   Sequence 695, Application US/09925297
Patent No. US20020081659A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA105
                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 1999-03-12
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 928
SEQ ID NO 695
LENGTH: 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 40.7'
Matches 98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: SITE
LOCATION: (27)
                                                                                    RESULT 5
US-09-925-297-695
231 I 231
                              235 V 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   231 I 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238 V 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-948-094-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
ô
                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٠۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
ATTLE OF INVENTION: Action and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Action Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                  57 FHFCGGSLISQSWVVTAAHCNVSPGRHF-----VVLGEYDRSSNAEPLQVLSVSRAITHP 111
                                                                                                                                                                                                                                                                                                                                                                        SWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLS-GVGNVT 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171 PAHLQQVALPLVTVNQCRQYWDSS-----ITDSMICAG--GAGASSCQGDSGGPLVC 220
                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                              4 LSLTLSLVLLGSSWG------CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG
                                                                                                                                                                                                                                  33;
                                                                                                                                                                                               Length 343;
                                                                                                                                                                               Score 410.5; DB 1U; Lc...-
pred. No. 9.8e-30;
                                                                                                                                                                                                                                  38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/978,295A CURRENT FILING DATE: 2001-10-15 PRIOR APPLICATION NUMBER: 09/918585
CURRENT APPLICATION NUMBER: US/09/948,094
UNUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 69, Application US/09978295A Patent No. US20020156006A1 GENERAL INFORMATION: APPLICANT: Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Paoni, Nicholas F.
Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Williams, P. Mickey Wood, William I.
                                                                                                                                                                                             33.6%;
36.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrara, Napoleon
Filvaroff, Ellen
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Botstein, David
Desnoyers, Luc
                                                                                                                                                                                                                                  91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Napier, Mary A.
Pan, James;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: P2630P1C11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumas, Daniel
                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245 PVEGLWYLTGI 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221 OKGNTWVLIGI 231
```

2001-07-30 NUMBER: 60/06225 1997-10-17 1997-11-03 NUMBER: 60/06531 1997-11-13 NUMBER: 60/06636 1997-11-21 NUMBER: 60/07745 1998-03-10 NUMBER: 60/07763 1998-03-11	88 88 88 88 88 88 88 88 88 88 88 88 88	υ ω ω ω ω ω ω ω α 4 4 4 4 4 4 4 4 4 4 4 4	8-04-09
FILING DATE: APPLICATION APPLICATION FILING DATE: FILING DATE: FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE:	APPLICATION FILING DATI FILING DATI APPLICATION FILING DATI FILING DATI FILING DATI FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI	APPLICATION PILLING DATI APPLICATION APPLICATION APPLICATION APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION APPLICATION APPLICATION APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATI APPLICATION FILING DATION FILING DATION FILING DATION FILING DATION FILING DA	ILING
PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR	PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR		Z.

PRIOR APPLICATION NUMBER: 60/08129
PRIOR APPLICATION NUMBER: 60/081955
PRIOR FILING DATE: 1998-04.15
PRIOR FILING DATE: 1998-04.15
PRIOR FILING DATE: 1998-04.15
PRIOR FILING DATE: 1998-04.15
PRIOR FILING DATE: 1998-04.15
PRIOR PILING DATE: 1998-04.15
PRIOR FILING DATE: 1998-04.15
PRIOR PILING DATE: 1998-04.15
PRIOR PILING DATE: 1998-04.15
PRIOR PILING DATE: 1998-04.21
PRIOR PILING DATE: 1998-04.22
PRIOR PILING DATE: 1998-04.22
PRIOR APPLICATION NUMBER: 60/08256
PRIOR PILING DATE: 1998-04.22
PRIOR PILING DATE: 1998-04.22
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.23
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-04.29
PRIOR PILING DATE: 1998-05.06
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1998-05.07
PRIOR PILING DATE: 1

```
TITLE OF INVENTION: Acids Encoding the Same CURRENT APPLICATION NUMBER: US/09/978.697
CURRENT APPLICATION NUMBER: US/09/978.697
CURRENT APPLICATION NUMBER: US/09/978.697
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 1907-10-10
PRIOR PLINKO DATE: 1907-10-17
PRIOR FILING DATE: 1907-10-17
PRIOR FILING DATE: 1907-10-17
PRIOR PLINKO DATE: 1907-10-17
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1907-11-13
PRIOR PLINKO DATE: 1908-03-11
PRIOR PLINKO DATE: 1908-03-11
PRIOR PLINKO DATE: 1908-03-11
PRIOR PLINKO DATE: 1908-03-11
PRIOR PLINKO DATE: 1908-03-12
PRIOR PLINKO DATE: 1908-03-12
PRIOR PLINKO DATE: 1908-03-12
PRIOR PLINKO DATE: 1908-03-12
PRIOR PLINKO DATE: 1908-03-13
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-20
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-30
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLINKO DATE: 1908-03-31
PRIOR PLIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/081071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-04-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EALTEGLICVITGWGRLSGVGNVIPAHLQQVALPLVIVNQC--RQYWDSSITDSMICAG- 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    330 ENFPDGKVCWTSGWGATEDGGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAGY 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213 YSSRIVGGNMSLLSQWPWQASLQ-FQCYHLCGGSVITPLWIITAAHCVYDLYLPKSWTIQ 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 33.5%; Score 408.5; DB 9; Best Local Similarity 39.9%; Pred. No. 2.1e-29; Matches 83; Conservative 31; Mismatches 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204 -GAGASSCQGDSGGPLVCQKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LTGGVDSCQGDSGGPLVCQERRLWKLVG 416
                                                                                             PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085700
PRIOR APPLICATION NUMBER: 60/085700
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PELING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 69, Application US/09978697
Patent No. US20020169284A1
GENERAL INFORMATION:
APPLICANT: AShkenaz1, Avi
                                LICATION NUMBER: 60/085323
                                                                               APPLICATION NUMBER: 60/085582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumas, Daniel
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ferrara, Napoleon
Filvaroff, Ellen
Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, Wei-Qiang
Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paoni, Nicholas F
         FILING DATE: 1998-05-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
                                                      ILING DATE: 1998-05-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers, Luc
Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-09-978-697-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

APPLICATION NUMBER: 60/084643

```
R AFFLLANDERS. 1998-07.

R APPLICATION NUMBER: 60/084639

R APPLICATION NUMBER: 60/084640

R APPLICATION NUMBER: 60/084640

R FILING DATE: 1998-05-07

R APPLICATION NUMBER: 60/084598

R FILING DATE: 1998-05-07

R APPLICATION NUMBER: 60/084600

R FILING DATE: 1998-5-07

R APPLICATION NUMBER: 60/084600

R FILING DATE: 1998-5-07
                                                                                                                                                                                                                                                                                                                                                       R APPLICATION NUMBER: 60/081952
R PILING DATE: 1998-04-15
R APPLICATION NUMBER: 60/081952
R FILING DATE: 1998-04-15
R APPLICATION NUMBER: 60/08188
R FILING DATE: 1998-04-15
R APPLICATION NUMBER: 60/082568
R FILING DATE: 1998-04-21
R APPLICATION NUMBER: 60/082704
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082804
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082707
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082707
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082707
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082796
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082796
R FILING DATE: 1998-04-23
R APPLICATION NUMBER: 60/083326
R FILING DATE: 1998-04-27
R PELLING DATE: 1998-04-27
R PELLING DATE: 1998-04-27
R PELLING DATE: 1998-04-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R APPLICATION NUMBER: 60/083392
R APPLICATION NUMBER: 60/083495
R APPLICATION NUMBER: 60/083495
R APPLICATION NUMBER: 60/083495
R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083499
R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083545
R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083554
R FILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083558
R APPLICATION NUMBER: 60/083558
R APPLICATION NUMBER: 60/083558
R APPLICATION NUMBER: 60/083558
R APPLICATION NUMBER: 60/083558
R APPLICATION NUMBER: 60/083568
R FILING DATE: 1998-04-29
R R PILING DATE: 1998-04-29
R APPLICATION NUMBER: 60/083414
R RILING DATE: 1998-04-30
R R APPLICATION NUMBER: 60/084366
R R PILING DATE: 1998-05-06
R R FILING DATE: 1998-05-06
R R PILING DATE: 1998-05-06
R R PILING DATE: 1998-05-06
R R PILING DATE: 1998-05-06
R APPLICATION NUMBER: 60/084414
R R RILING DATE: 1998-05-06
R APPLICATION NUMBER: 60/084637
R APPLICATION NUMBER: 60/084637
R R RILING DATE: 1998-05-06
R APPLICATION NUMBER: 60/084637
                               APPLICATION NUMBER: 60/081195
FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081203
                                                                                                            APPLICATION NUMBER: 60/081229
APPLICATION NUMBER: 60/081229
FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081955
                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/081817
APPLICATION NUMBER: 60/081817
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081819
FILING DATE: 1998-04-08
                               PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR 
   PRIOR
```

```
87 LGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147 EALTEGLICVITGWGRLSGVGNVTPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG- 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 FSORIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33.5%; Score 408.5; DB 939.9%; Pred. No. 2.1e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204 -GAGASSCQGDSGGPLVCQKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389 LTGGVDSCQGDSGGPLVCQERRLWKLVG 416
                                                    PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085323
PRIOR APPLICATION NUMBER: 60/085323
PRIOR PILING DATE: 1998-05-13
PRIOR PILING DATE: 1998-05-15
PRIOR PPLICATION NUMBER: 60/085700
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/08559
PRIOR PILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR PAPLICATION NUMBER: 60/08559
PRIOR FILING DATE: 1998-05-15
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
PRIOR PILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard, Audrey
Goddwski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-978-192A-69
; Sequence 69, Application US/09978192A
; Patent No. US20020177553A1
PRIOR APPLICATION NUMBER: 60/085339
PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085338
                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/085697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paoni, Nicholas F.
Roy, Margaret Ann
Shelton, David L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker Kevin P.
Botstein, David
Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 39.99
Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kljavin, Ivar J.
Kuo, Sophia S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fong, Sherman
Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

APPLICANT:

IPPLICATION NUMBER: 60/081049 ILLING DATE: 1998-04-08

```
R APPLICATION NUMBER: 60/08336

R APPLICATION NUMBER: 60/08336

R APPLICATION NUMBER: 60/08332

R FILING DATE: 1998-04-28

R FILING DATE: 1998-04-28

R FILING DATE: 1998-04-29

R APPLICATION NUMBER: 60/083495

R FILING DATE: 1998-04-29

R FILING DATE: 1998-04-29

R APPLICATION NUMBER: 60/083496

R FILING DATE: 1998-04-29

R APPLICATION NUMBER: 60/083496

R APPLICATION NUMBER: 60/083496

R APPLICATION NUMBER: 60/083545

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29

R RILING DATE: 1998-04-29
                                                                                                                    NR APPLICATION NUMBER: 60/081071

NR FILING DATE: 1998-04-08

NR FILING DATE: 1998-04-08

NR FILING DATE: 1998-04-08

NR FILING DATE: 1998-04-09

NR FILING DATE: 1998-04-09

NR FILING DATE: 1998-04-09

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/081955

NR APPLICATION NUMBER: 60/081919

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/081819

NR FILING DATE: 1998-04-15

NR FILING DATE: 1998-04-15

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/081952

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/08195

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/08156

NR APPLICATION NUMBER: 60/08156

NR FILING DATE: 1998-04-15

NR APPLICATION NUMBER: 60/082568

NR FILING DATE: 1998-04-21

NR APPLICATION NUMBER: 60/082568

NR APPLICATION NUMBER: 60/082568

NR APPLICATION NUMBER: 60/082569

NR FILING DATE: 1998-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R APPLICATION NUMBER: 60/082704
R FILING DATE: 1998-04-22
R PAPLICATION NUMBER: 60/082804
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082700
R FILING DATE: 1998-04-22
R PAPLICATION NUMBER: 60/082797
R FILING DATE: 1998-04-22
R APPLICATION NUMBER: 60/082797
                                                             PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION OF PRESENTATION O
                                                APPLICANT: Williams, P. Mickey
APPLICANT: Williams, P. Mickey
TITLE OF INVENTION: Acids and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630PL09
CURRENT APPLICATION NUMBER: US/09/978,192A
CURRENT FILING DATE: 2001-10-15
PRIOR PILING DATE: 2001-07-30
PRIOR PILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06250
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-03
PRIOR FILING DATE: 1997-11-13
PRIOR PILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/06334
PRIOR PILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/06364
PRIOR APPLICATION NUMBER: 60/06364
PRIOR APPLICATION NUMBER: 60/06364
PRIOR APPLICATION NUMBER: 60/0676364
PRIOR APPLICATION NUMBER: 60/0676364
PRIOR APPLICATION NUMBER: 60/077450
PRIOR APPLICATION NUMBER: 60/077450
PRIOR APPLICATION NUMBER: 60/077632
PRIOR APPLICATION NUMBER: 60/077632
PRIOR PILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NR APPLICATION NUMBER: 60/078939

R FILING DATE: 1998-03-20

R FILING DATE: 1998-03-25

NR APPLICATION NUMBER: 60/079656

NR RILING DATE: 1998-03-25

NR FILING DATE: 1998-03-26

NR FILING DATE: 1998-03-26

NR FILING DATE: 1998-03-27

NR FILING DATE: 1998-03-27

NR FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/078936
FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/078910
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079663
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/080165
FILING DATE: 1998-03-31
APPLICATION NUMBER: 60/080194
FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/079786-
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/077649
FILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/077791
FILING DATE: 1998-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/078004
FILING DATE: 1998-03-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/078886
FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/079923
FILING DATE: 1998-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/080105
FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/080333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080334
FILING DATE: 1998-04-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/077641 FILING DATE: 1998-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ICATION NUMBER: 60/080107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/080327
Stewart, Timothy A.
Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .998-04-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-03-31
```

APPLICATION NUMBER: 60/083559
FILING DATE: 1998-04-29
APPLICATION NUMBER: 60/083500
APPLICATION NUMBER: 60/083742
APPLICATION NUMBER: 60/083742

FILING DATE: 1998-04-30 APPLICATION NUMBER: 60/084366 FILING DATE: 1998-05-05 APPLICATION NUMBER: 60/084414 FILING DATE: 1998-05-06 APPLICATION NUMBER: 60/084639 FILING DATE: 1998-05-07 APPLICATION NUMBER: 60/084640

FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/084598

APPLICATION NUMBER: 60/08441 FILING DATE: 1998-05-06 APPLICATION NUMBER: 60/084637 FILING DATE: 1998-05-07

```
PRIOR APPLICATION NUMBER: 60/062250
PRIOR PAPLICATION NUMBER: 60/063121
PRIOR PILING DATE: 1997-10-17
PRIOR FILING DATE: 1997-10-24
PRIOR PILING DATE: 1997-10-24
PRIOR PELICATION NUMBER: 60/063121
PRIOR APPLICATION NUMBER: 60/063540
PRIOR FILING DATE: 1997-10-28
PRIOR PELICATION NUMBER: 60/063541
PRIOR PELICATION NUMBER: 60/063541
PRIOR APPLICATION NUMBER: 60/063544
PRIOR APPLICATION NUMBER: 60/063544
PRIOR APPLICATION NUMBER: 60/063544
PRIOR APPLICATION NUMBER: 60/063734
PRIOR APPLICATION NUMBER: 60/063734
PRIOR PELING DATE: 1997-10-28
PRIOR APPLICATION NUMBER: 60/063379
PRIOR PELING DATE: 1997-10-28
PRIOR PELING DATE: 1997-10-29
PRIOR PELING DATE: 1997-10-29
PRIOR PELING DATE: 1997-10-29
PRIOR PELING DATE: 1997-10-21
PRIOR APPLICATION NUMBER: 60/066466
PRIOR PELING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/066466
PRIOR PELING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/069425
PRIOR APPLICATION NUMBER: 60/069425
PRIOR APPLICATION NUMBER: 60/069425
PRIOR APPLICATION NUMBER: 60/069425
PRIOR APPLICATION NUMBER: 60/069425
PRIOR APPLICATION NUMBER: 60/069425
PRIOR PELING DATE: 1997-12-12
PRIOR APPLICATION NUMBER: 60/06993
PRIOR PELING DATE: 1997-12-12
PRIOR APPLICATION NUMBER: 60/077632
PRIOR APPLICATION NUMBER: 60/077632
PRIOR PELING DATE: 1999-03-10
PRIOR PILING DATE: 1999-03-10
PRIOR PILING DATE: 1999-03-10
PRIOR PILING DATE: 1999-03-10
PRIOR PILING DATE: 1999-03-11
PRIOR PELING DATE: 1999-03-10
PRIOR PILING DATE: 1999-03-20
PRIOR PILING DATE: 1999-03-3-11
PRIOR PILING DATE: 1999-03-3-11
PRIOR PILING DATE: 1999-03-3-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR FILING DATE: 1998-03-31
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR PELLING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081049
PRIOR APPLICATION NUMBER: 60/081049
PRIOR FILING DATE: 1998-04-08
PRIOR FILING DATE: 1998-04-08
PRIOR PELLING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081195
PRIOR APPLICATION NUMBER: 60/081195
PRIOR PELLING DATE: 1998-04-09
PRIOR FILING DATE: 1998-04-09
PRIOR FILING DATE: 1998-04-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/082568
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC ITTLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87 LGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :| :| : | : | : | : | 3.2 VGLVSLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         213 YSSRIVGGNMSLLSQWPWQASLQ-FQGYHLCGGSVITPLMIITAAHCVYDLYLPKSWTIQ 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147 EALTEGLICVITGWGRLSGVGNVIPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.1e-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Pred. No. 2.1e
31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C1 CURRENT APPLICATION NUMBER: US/10/052,586 CURRENT FILING DATE: 2002-01-15 PRIOR PILING DATE: 1997-09-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33.5%; Score 408.5; 39.9%; Pred. No. 2.10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     389 LTGGVDSCQGDSGGPLVCQERRLWKLVG 416
                      R APPLICATION NUMBER: 60/084600
R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/084627
R APPLICATION NUMBER: 60/084627
R APPLICATION NUMBER: 60/086339
R FILING DATE: 1998-05-07
R APPLICATION NUMBER: 60/085339
R FILING DATE: 1998-05-13
R APPLICATION NUMBER: 60/085338
R FILING DATE: 1998-05-13
R APPLICATION NUMBER: 60/085323
R APPLICATION NUMBER: 60/085582
R FILING DATE: 1998-05-13
R APPLICATION NUMBER: 60/085582
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085599
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085599
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085599
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085599
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085599
R FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 64, Application US/10052586 Patent No. US20020127584A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-05-15
APPLICATION NUMBER: 60/085704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697
DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
Watanabe, Colin K.
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best_Local Similarity
Matches 83; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-052-586-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                  PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PPRIOR PP
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
PRIOR APPLICATION NUMBER: 60/08120
PRIOR APPLICATION NUMBER: 60/08121
PRIOR APPLICATION NUMBER: 60/08132
PRIOR APPLICATION NUMBER: 60/08132
PRIOR APPLICATION NUMBER: 60/08132
PRIOR APPLICATION NUMBER: 60/081495
PRIOR APPLICATION NUMBER: 60/081495
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PLILING DATE: 1986-04-29
PRIOR PAPLICATION NUMBER: 60/08159
PRIOR PAPLICATION NUMBER: 60/08160
PRIOR PAPLICATION NUMBER: 60/08160
PRIOR PAPLICATION NUMBER: 60/08160
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR PAPLICATION NUMBER: 60/08161
PRIOR P
```

```
:| : | : : | : : | : : | : : | : : | : : | : : | : : | : | : | | | | : | : | | | | | : | : | | | | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147 EALTEGLICVITGWGRLSGVGNVTPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG- 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213 YSSRIVGGNMSLLSQWPWQASLQ-FQGYHLCGGSVITPLWIITAAHCVYDLYLPKSWTIQ 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 33.5%; Score 408.5; DB 12; Length 453; Best Local Similarity 39.9%; Pred. No. 2.1e-29; Matches 83; Conservative 31; Mismatches 83; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTLE OF INVENTION: Nucleic Acids, Proteins and Antibodies; TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies; FILE REPREMENTE: PA106; CURRENT APPLICATION NUMBER: US/09/925,301
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05882
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR PILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1694
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               389 LTGGVDSCQGDSGGPLVCQERRLWKLVG 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204 -GAGASSCQGDSGGPLVCQKGNTWVLIG 230
RETLING DATE: 1998-06-10

REPLICATION NUMBER: 60/088740

REPLICATION NUMBER: 60/08811

REPLICATION NUMBER: 60/08824

RETLING DATE: 1998-06-10

REPLICATION NUMBER: 60/08824

RETLING DATE: 1998-06-10

REPLICATION NUMBER: 60/08826

RETLING DATE: 1998-06-10

REPLICATION NUMBER: 60/08826

RETLING DATE: 1998-06-11

OR APPLICATION NUMBER: 60/08863

OR FILING DATE: 1998-06-11

OR APPLICATION NUMBER: 60/08863

OR FILING DATE: 1998-06-11

OR APPLICATION NUMBER: 60/08909

OR FILING DATE: 1998-06-12

OR APPLICATION NUMBER: 60/089105

OR RILING DATE: 1998-06-12

OR APPLICATION NUMBER: 60/0895105

OR FILING DATE: 1998-06-12

OR APPLICATION NUMBER: 60/0895105

OR FILING DATE: 1998-06-12

OR APPLICATION NUMBER: 60/0895105

OR FILING DATE: 1998-06-12

OR APPLICATION NUMBER: 60/0895105

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895105

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895105

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895305

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895305

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895305

OR RILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/0895305

OR RILING DATE: 1998-06-17

OR RELING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1017, Application US/09925301; Patent No. US20020052308A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-925-301-1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87
               PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

<u>;</u>

. .

```
Ouery Match
Best Local Similarity
Matches 84; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-888-615-103
                                                                                                                                                                                                                                                                                                                        327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 103
                                                                                                                                                                                                                                                                                                    SEQ ID NO 8
LENGTH: 33
                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Shi et al.
TITLE OF INFORMATION:
TITLE OF INFORMATION Serine protease Polynucleotides, Polypeptides, and Antibodies
TITLE OF INVERNION:
TITLE OF INVERNION:
TITLE OF INVERNION:
TITLE OF INVERNION SERINE PROSPA
CURRENT APPLICATION NUMBER: US/09/804,156
CURRENT FILING DATE: 2001-03-13
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 38
SSOFWARE: Patentin Ver. 2.0
SSOFWARE: Patentin Ver. 2.0
LENGTH: 327
                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7;
                                                                                                                                                                                                      87 LGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                             147 EALTEGLICVITGWGRL-SGVGNVTPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG 203
                                                                                                                                                                                                                                                                                                      87 LGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :| : | : | : | : | 145 VGLVSLLDNPAPSHL--VEKIVYHSKYKPKRLGNDIALMKLAGPLTFNEMIQPVCLPNSE 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           147 EALTEGLICVITGWGRL-SGVGNVTPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  203 ENFPDGKVCWTSGWGATEDGAGDASPV-LNHAAVPLISNKICNHRDVYGGIISPSMLCAG 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                     12; Gaps
                                                                                                                               30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                            12;
                                                     Length 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 327;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82;
                                                     Query Match 33.4%; Score 408; DB 10; Best Local Similarity 40.2%; Pred. No. 1.1e-29; Matches 84; Conservative 31; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
33.4%; Score 408; DB 10;
Best Local Similarity 40.2%; Pred. No. 1.5e-29;
Matches 84; Conservative 31; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                               183 YLTGGVDSCQGDSGGPLVCQERRLWKLVG 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           262 YLTGGVDSCQGDSGGPLVCQERRLWKLVG 290
                                                                                                                                                                                                                                                                                                                                                       204 --GAGASSCQGDSGGPLVCQKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     204 --GAGASSCQGDSGGPLVCQKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/09946633
Patent No. US20020119925al
GENERAL INFORMATION:
APPLICANT: Ni et al.
TITLE OF INVENTION: PT005P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo sapiens
US-09-804-156-16
ORGANISM: Homo sapiens
               US-09-925-301-1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-946-633-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                               ò
                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87 LGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :| | | | : | : | : | : | : | | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 | : | 111 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         147 EALTEGLECVTTGWGRL-SGVGNVTPAHLQQVALPLVTVNQC--RQYWDSSITDSMICAG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 327;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 454;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.4%; Score 408; DB 10;
ilarity 40.2%; Pred. No. 1.5e-29;
Conservative 31; Mismatches 82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33.4%; Score 408; DB 10;
40.2%; Pred. No. 2.3e-29;
tive 31; Mismatches 82;
CURRENT APPLICATION NUMBER: US/09/946,633
CURRENT FILING DATE: 2001-09-06
PRIOR APPLICATION NUMBER: US/09/946,633
PRIOR FILING DATE: 2000-06-20
PRIOR PLICATION NUMBER: 60/133,239
PRIOR FILING DATE: 1999-05-07
PRIOR PELICATION NUMBER: 60/135,163
PRIOR PELICATION NUMBER: 60/135,163
PRIOR FILING DATE: 1999-06-20
PRIOR APPLICATION NUMBER: 60/152,935
PRIOR FILING DATE: 1999-09-09
PRIOR APPLICATION NUMBER: 60/162,935
PRIOR FILING DATE: 1999-09-09
PRIOR PRILING DATE: 1999-010-09-09
PRIOR PLILNG DATE: 1999-010-09-09
PRIOR PLILNG DATE: 1999-011-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: WHYTE, DAVID
APPLICANT: CARNEDEEL, SEAN
APPLICANT: CHARYDCZAK, GLEN
APPLICANT: MANNING, GERARD
APPLICANT: SUDARSANAM, SUCHA
TITLE OF INVENTION: NOVEL PROTEASES
FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: U5/09/888,615
CURRENT FILING DATE: 2001-06-26
PRIOR PELLING DATE: 2000-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204 --GAGASSCQGDSGGPLVCQKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 262 YLTGGVDSCQGDSGGPLVCQERRLWKLVG 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 103, Application US/09888615
Patent No. US20020064856A1
GENERAL INFORMATION:
APPLICANT: PLOWMAN, GREGORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 150
SOFTWARE: PatentIn Ver. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
CORGANISM: Homo sapiens
US-09-888-615-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens
US-09-946-633-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 84; Conserv
```

```
œ
                                                                                                                                                                        LGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRISPVCLASSN 146
                                                                                             147 EALTEGLICVITGWGRL-SGVGNVTPAHLQQVALPLVIVNQC--RQYWDSSITDSMICAG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQY- 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30 FSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNVS---PGRHFVV 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16 SWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAH 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 32.5%; Score 397; DB 9; Length 791;
Best Local Similarity 39.3%; Pred. No. 4.6e-28;
Matches 88; Conservative 35; Mismatches 83; Indels 18;
                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Abbott Laboratories
APPLICANT: Henrin, Jack
APPLICANT: Henrin, Jack
APPLICANT: Henrin, Jack
APPLICANT: Henrin, Jack
APPLICANT: Henrin, Jack
APPLICANT: Henrin, Davidson, Donald J.
TITLE OF INVENTION: ANTIANGIOGENIC POLYPEPTIDES AND METHODS
TITLE OF INVENTION: FOR INHIBITING ANGIOGENESIS
FILE REFERENCE: 6738.US.02
CURRENT APPLICATION NUMBER: US/09/967,386
CURRENT APPLICATION NUMBER: US 60/236,550
PRIOR APPLICATION NUMBER: US 60/236,550
PRIOR APPLICATION NUMBER: US 60/236,550
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              115 FLNGRVQSTELCAGHLAGGTDSCQGDSGGPLVCFEKDKYILQGV 758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -WDSSITDSMICAG--GAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: December 20, 2002, 15:21:06
Job time : 8.30435 secs
                                                                                                                                                                                                                     Sequence 1, Application US/09967386 Patent No. US20020159992A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo sapiens
US-09-967-386-1
                                                                                                                                                                                                                                                                                                                  RESULT 15
US-09-967-386-1
                                                                       87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               132
                                                                                                                                       ογ
                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                g
                                                                     ö
                                                                                                 q
                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

h			
			•
			x'

```
December 20, 2002, 15:14:08; Search time 28.6087 Seconds (without alignments) 1663.721 Million cell updates/sec
                                                                                                                                                                                                         US-09-856-319B-2_COPY_1_231
1221
1 MLLLSLTLSLVLLGSSWGCG........GDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                           671580
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                              671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sp_archea:*
sp_bacteria:*
sp_fung1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPTREMBL_21:*
                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database :
                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                       Sequence:
                                                                                                                          Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

sp_vertebrate:*
sp_unclassified:*

sp_rodent:* sp_virus:* sp_plant: *

55... 1111... 112... 115... 116...

sp_rvirus:*
sp_bacteriap:*
sp_archeap:*

sp_human:* sp_invertebrate:* sp_mammal:*

sp_mhc:* sp_organelle:* sp_phage:*

SUMMARIES

## Sco Result . 9

CC TRYPSIN FAMILY. DR EMBL; AB020757; BAB	DR	DR	mus musculu DR InterPro; IPR001254	DR	DR	paralichthy DR SMART; SM00020; Ti	DR	DR	DR	KW	mus musculu SO SEOUENCE 264 AA	•	mus musculu Query Match			paralichthy
Description	THE SECOND	Q9d7p8 mus musculu	Q9er05 mus m	m snm 096p6O	. 09w7q4 paral	09w7q3 paral	09dc86 mus m	Q9cr35 mus m	m snm 8x8p6Ö	Q9pwq6 gadus	09cq52 mus m	092077 gadus	Q9d7t9 mus m	Q9w7p9 paral	Q9dc82 mus m	09w7q1 paral
ΙD	095028	Q907P8	Q9ER05	096060	09W7Q4	Q9W7Q3	09DC86	Q9CR35	Q9D8X8	09PW06	090052	092077	Q9D7T9	Q9W7P9	Q9DC82	09W7Q1
80	: =	11	11	11	13	13	11	11	7	13	11	13	11	13	11	13
Query Match Length DB ID	264	264	264	264	261	260	263	263	263	263	269	266	269	260	164	249
Query Match	90.3	89.5	89.5	88.7	62.8	58.2	56.1	55.9	55.4	55.2	38.7	38.1	38.0	37.2	36.6	36.2
ore	102	1093	1093	1083	56.5	5.01	34.5	37.5	6.5	74.5	72.5	55.5	54.5	54.5	447	442

ö

096qv5 homo sapien 09bk47 luidia foli 091039 gadus morhu 096q18 homo sapien 096899 scolopendra 09w7q0 paralichthy 095kw7 bos taurus 09w7q2 paralichthy 091674 xenopus lae 019023 macaca mula 099144 mus musculu 08vde0 mus musculu 08vde0 mus musculu 08vde0 mus musculu 08vde0 mus musculu 08vde0 mus musculu 08vde0 mus musculu 08vde0 perlomyculu 042568 petromyzon 09dgr2 xenopus lae 042608 petromyzon 09dgr2 xenopus lae	
0960V5 09BK47 0960L8 0960C8 096899 098700 098702 0991674 099023 099164 099166 062562 091875 042608	0 00
269 4 267 5 2270 13 2270 4 2270 5 266 13 2524 13 257 6 257 6 257 6 257 6 3334 6 3334 6 3334 6 3334 6	104446464
พ. ด. ด. 4. 4. น. น. พ. ต. น. น. ด. น. น. อ. ต. น. พ. ด. ด. 4. 4. น. น. พ. ต. น. น. ด. น. น. อ. ต. น.	, , , , , , , , , , , , , , , , , , , ,
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
4 4 4 2 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4	385.55 385.55 381.381 381.381 381.381 381.381
	3 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

## ALIGNMENTS

```
09EQ28
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
ENMAR-2001 (TrEMBLrel. 21, Last annotation update)
MARING NOTVEGICUS (Rat).
ENKARYOTA: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
MAMMMALL EUTERIA: Solurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                           ر.
د
                                                                                                                                                                                                                                                                                                        "Molecular cloning of rat chymopasin.";
Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                                                                                                                                                                    [1]
SEQUENCE FROM N.A.
TISSUE=RAT PANCREAS;
Sogame Y., Mitsui S., Kataoka K., Kashima K., Kato M., Sakagami
Yamaguchi N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90.3%; Score 1102; DB 11; Length 264; 87.0%; Pred. No. 5.1e-92; ive 17; Mismatches 13; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28116 MW; F9ED5D210FD3500E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YP_SPC; 1.
TRYPSIN_DOM; 1.
TRYPSIN_HIS; UNKNOWN_1.
TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                     4; Chymotrypsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                            34; Ser_protea
psin; 1.
HYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                  B20287.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vative
                                                                                                                                                                                                 NCBI_TaxID=10116;
RESULT 1
Q9EQZ8
```

ö

0; Gaps

Indels

12;

Mismatches

21;

```
Matches 198; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9ER05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9ER05
                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP;
                                                                                                      g
                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                      ò
                                                                                                                                                             ò
                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-C57BL/63; TISSUB-TONGUE;

X MEDLINE-21085660; PubMed=11217851;

X Rawal J., Shinagawa A., Shibata K., Yoshino M., Itch M., Ishii Y.,

X Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Azawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Salto T., Okazaki T., Golobori T., Bono H., Kasukwa T., Salto R.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Kuehl P., Lewis S., Matsuo Y., Nikaido I., Resole G., Quackenbush J.,

Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Kuehl P., Lewis S., Matsuo Y., Nikaido I., Rashangaren D., Washio T.,

Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carihini P., Ga Bonaldo M.F.,

Brownstein M.J., Bult C., Eletcher C., Fujita M., Gariboldi M.,

Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Lyons P., Marchioni L., Massima J., Mazaralii J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodiiquez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Ruzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

Whyshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Hayashizaki Y.,
                                                                                                                                  61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                             121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
  9
                                                   9
                             1 MLLLSLTLSLTLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NATURE 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1093; DB 11; Length 264; Pred. No. 3.3e-91;
                                                                                                                                                                                                                                                                                                                                                181 LVTVNQCRQYWGSRITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                  181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROBLEM: PRODOBS; trypsin; 1.
PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
HYGYOLASE, SETIME PETCHESSE.
SEQUENCE 264 AA; 28167 MW; 1D979469A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AK009019; BAB26029.1; -. HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. 1810004D15Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTRL OR 1810004D15RIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09D7P8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9D7P8
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9D7P8
                                                                                                                                                                                                                                                            g
                                                g
                                                                                                                                                     g
                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAC OOC OOC OOL THE STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR STANDAR ST
  δ
                                                                                                      ö
```

89.5%;

Query Match Best Local Similarity

```
ö
                                                                                                            DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GGSLISPNWVVTAAHCOVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGFHFC 60
1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                             1 MLLISLTLSLVLIGSSWGCGVPAITPALSYNQRIVNGENAVPGSWPWQVSLQDNTGPHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 264;
                                                                                                                                                                                                                                                                                                                                             231
                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                        181 LVTVNQCRQYWGARITDAMICAGGSGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                             181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
Mitsul S., Yamaquchi N.;
"Molecular Cloning of mouse chymopasin.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28135 MW; 1D979709A07056C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 89.5%; Score 1093; DB 11;
Best Local Similarity 85.7%; Pred. No. 3.3e-91;
Matches 198; Conservative 21; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; 201.256 ...
MGD: MGI:88558; Ctrl.
InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001314; Chymotrypsin.
InterPro: IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PR1WTS; PR00127; CHYMOTRYPSIN.
PR051TE; PS00127; Tryp_SPC; 1.
PR05ITE; PS00134; TRYPSIN_DOM; 1.
PR05ITE; PS00135; TRYPSIN_SER; 1.
PR05ITE; PS00135; TRYPSIN_SER; 1.
PR05ITE; PS00135; TRYPSIN_SER; 1.
PR05ITE; PS00135; TRYPSIN_SER; 1.
PR05ITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last semi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=129S6/SVEVTAC; TISSUE=SPLEEN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chymopasin (Chymotrypsin A CTRA-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AB016228; BAB20275.1; -. EMBL; AF236365; AAL11034.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2001 (TrEMBLrel. 16, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bjoernslett M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTRL OR CTRA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
```

```
DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                      09W704;
                                                                                                                                                                    09W7Q4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177
                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
Q9W7Q3
                                                                                                                                           RESULT
09W7Q4
                                           q
                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E N E E
                                                                       ò
                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                      RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., A Arawawa T., Hara A., Fukudas S., RA Arawa K., Izawa M., Nishi K., Krono H., Rackin J., Perkuda S., RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., RA Kuchi P., Lewis S., Marsuo Y., Nikaido I., Pesole G., Ouackenbush J., RA Fleischmann W., Gaasterland T., Gissi C., King B., Rochiwa H., Rackin J., Washio T., RA Sakai K., Okido T., Furun B., Yoshida H., Baldarelli R., Barsh G., RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., RA Lyons P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Rak Suzuki H., Toyo-oka K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., RA Hasahizai Y., Rowali H., Rowali H., Rowali H., Rowali H., Robiski S., Kawaji H., Kohtsuki S., Manayahizani Y., Rakani Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
121 DLTLLKLASPARYTAQVSPVCLASTNEALPSGLTCVTTGWGRISGVGNVTPARLQQVVLP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GGSLISPNWVVTAAHCQVTPGRHFVVLGEYDRSSNAEPVQVLSIARAITHPNWNANTWNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 409:685-690(2001).
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88.7%; Score 1083; DB 11; Length 264; 85.3%; Pred. No. 2.7e-90; 1.ve 21; Mismatches 13; Indels 0;
                                                        1D979719E07C16DE CRC64;
                                                                                                                                                                    17, Created)
17, Last sequence update)
21, Last annotation update)
                                                                                                                                         264 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:88658; Ctrl.
InterPor: IPR001314; Chymotrypsin.
InterPor: IPR001314; Chymotrypsin.
InterPor: IPR00134; Scr_protease_fry.
Pfam: PF00089; trypsin. 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC: 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LS; UNKNOWN_1
                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AK007333; BAB24967.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28151 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hydrolase; Serine protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best_Local Similarity 85.3 Matches 197; Conservative
                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. 1810004D15Rik protein.
                                                                                                                                                                                                                             CTRL OR 1810004D15RIK.
                                                                                                                                                                                                                                             Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P00766; 4CHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264 AA;
                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                    01-JUN-2001
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                         096060
              q
                                                                    g
                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                           ò
```

```
59 GGSLISPYWVVTAAHCTVSPRNHRVILGEHDRQYNNEDIQVMSIARAITHPYYNSQNFNN 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 DITLLRLSSPVQMTSRVSPVCLASSSTSIPSGTKCVTTGWGRTGQTS--SPRYLQQTSLP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neoprerygii; Teleostei; Neoteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
Pleuronectoidei; Paralichthyidae; Paralichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suzuki T., Srivastava A.S., Kurokawa T.; "Japanese flounder mRNA for chymotrypsinogen 1."; Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases. --- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MILLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; Length 261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 LVTVNQCRQYWD-SSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                          Indels
181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28184 MW; D7090A9D65395B7D CRC64;
                                                                                                                                                                                                                               01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9W7Q3 PRELIMINARY; PRT; 260 AA.
09W7Q3;
01NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; I.
SMART; SM00020; Trypsin; I.
PR0SITE; PS50240; TRYPSIN_DOM; I.
PROSITE; PS00134; TRYPSIN_LOM; I.
PROSITE; PS00135; TRYPSIN_LSER; I.
Hydrolase; Serine protease.
                                                                                                                                                                                 ₹
                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                Chymotrypsinogen 1.
Paralichthys olivaceus (Flounder)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AB029753; BAA82365.1; -. HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62.8%;
61.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS; S01.256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-8255;
```

'n

```
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGD; MGI:1913723; 2200008D09Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AK003060; BAB22539.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2200008D09Rik protein. 2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P00766; 1GCT.
MEROPS; S01.152; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9CR35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09CR35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70 VVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLAS 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130 PAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQ 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      126 PAQMNMRVSPVCVAETSDNFAGGMKCVTSGWGLTRHNAPDTPALLQQAALPLLTNDDCRR 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 LVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSW 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/G5; TISSUE=SPLEEN;
MEDLINE=21085660; PubMed=11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
                                                         Paralichthys Olivaceus (Flounder).

Bukaryota: Metazoa: Chordata: Craniata: Vertebrata: Buteleostomi:
Actinopterygii: Teleostei: Buteleostei: Neoteleostei:
Acanthomorpha: Acanthopterygii: Percomorpha: Pleuronectiformes;
Pleuronectoidei: Paralichthyidae: Paralichthys.
                                                                                                                                                                                                                                                                                                                                                       Suzuki T., Srivastava A.S., Kurokawa T.;
Suzuki T., Srivastava A.S., Kurokawa T.;
Japanese floudder mRNA for chymotrpsinogen 2.";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL; AB029754; BAA82366.1; -.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.2%; Score 710.5; DB 13; Length 260; 57.7%; Pred. No. 1.6e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEROPS; SOL.152; ...
InterPro; IRR001314; Chymotrypsin.
InterPro; IRR001314; Chymotrypsin.
InterPro; IRR001314; Chymotrypsin.
InterPro; IRR001314; Chymotrypsin.
InterPro; IRR001314; LTYPSin. 1.
IRR0112; PR00122; CHYMOTRYPSIN.
IRR0112; PS00134; TRYPSIN. 11.
IRR0112; PS00134; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYPSIN. 11.
IRR0113; PS00135; TRYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190.YWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 128; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel. 2200008D09Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUE=PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                             NCBI_TaxID=8255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2200008D09RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09DC86;
09DC86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DDE BERNANDER KRANDER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schrill L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washlo T., Sakai K., Okido T., Furuno M., Anno H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Gustincich S., Hill D., Hoffmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodfiguez I., Sakamoto N., Sazaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-Oka K., Wang K.H., Weltz C., Whittaker C., Wilming L., Wansheller R., Ranguki H., Robitsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GGSLISENWVVTAAHCGVKT-TNVVVAGEFDQGSDEENVQVLKIAQVFKNPKFNSFTVRN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki Y.;
Hayashizaki Y.;
Hayashizaki Y.;
Haynotional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=STOMACH, SPLEEN, AND PANCREAS;
MEDLINE=21085660; PubMed=11217851;
Kawai J., Shinagawa A., Shishi K., Yoshino M., Ishii Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda Arakawa T., Hara A., Fukunishi Y., Konno H., Rondo S., Yamanaka Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27821 MW; 2620A27AFBA5D04D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.1%; Score 684.5; DB 1
54.5%; Pred. No. 3.7e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match 56.1%; Score b84.5; w
Best Local Similarity 54.5%; Pred. No. 3.7e-'
Matches 126; Conservative 38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00722; CHYMOTRIPSIN.
SMART; SM00202; TYP_SER; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ERS; 1.
PROSITE; PS00135; TRYPSIN_RS; 1.
SEQUENCE 263 AA; 27021 WW; 2620A27AFB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
```

ij

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90Md60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O9PWQ6
                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Fledschmann W., Gasterland T., Gissi C., King B., Kochiwa H., Ashburner M., Batalov S., Casavant T., Fledschmann W., Gasterland T., Gissi C., King B., Kochiwa H., Ashrin D., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Raki K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Anderstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wanshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GGSLISENWVVTAAHCGVKT-TDVVVAGEFDQGSDEENVQVLKIAQVFKNPKENSFTVRN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-590(2001).
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27822 MW; 28C4487AF1A26B27 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 55.9%; Score 682.5; DB 13
Best Local Similarity 54.5%; Pred. No. 5.6e-54;
Matches 126; Conservative 37; Mismatches 67,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS, PRO072; CHYBAIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL, AK008927; BAB25971.1; -.
BMBL, AK003079; BAB2553.1; -.
EMBL, AK007765; BAB25541.1; -.
EMBL, AK007815; BAB2580.1; -.
EMBL, AK008789; BAB25861.1; -.
EMBL, AK008889; BAB25861.1; -.
HSSP; P00766; 1GCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEROPS; S01.152; -.
MGD; MGI:1913723; 2200008D09Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2002 (TrEMBLrel. 21,
2200008D09R1K, protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001254; Ser_
Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9D8X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
         RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RRAPA
RAPA
RRAPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

```
CETRAINCESTBL/63; TISSUE-PANCREAS;

KEDLINE-21085660; PubMed-11217851;

Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Rawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., A Arakwa T., Hara A., Eukunishi Y., Konno H., Adachi J., Fukuda S., Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Radota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T., Radota K., Matsuda H.A., Saburner M., Batalov S., Casawant T., Rahl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Anno H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ringwald M., Rodriguez I., Sakamoto N., Salaki H., Sato K., Schoenbach C., Schoenbach C., Sakamoto N., Suzuki H., Toyo-Oka K., Wang K.H., Wettz C., Whittaker C., Wilming L., Wanshaw-Bonis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., Namanaki J., Wanshaw-Bonis A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQOVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 409:685-690(2001).
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL: AK007566; BAB25112.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MAFLWLVSCFALVGATFGCGVPAIQPVLTGLSRIVNGEDAIPGSWPWQVSLQDRTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS: PRO0722; CHYMOTRYPSIN.
SMART; SM00020; TRYP_SPC; 1.
PROSITE; PS00134; TRYPSIN_DM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
Hydrolase; Serine protease; Serine protease; Serine 27898 MW; C0638FB8F905A92F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2002 (TrEMBLrel. 13, Last sequence update) Chymotrypsin B precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. 1.9e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55.4%; Score 676.5; 54.1%; Pred. No. 1.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGD. MGI.1913723; 2200008D09Rik.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O9PWO6;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last seq
01-MAR-2002 (TrEMBLrel. 20, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gadus morhua (Atlantic cod)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best_Local Similarity 54.1
Matches 125; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00089; trypsin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hayashizaki Y.;
```

ï

```
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [1]
SEQUENCE FROM N.A.
MEDLINE-96262679; PubMed-8925447;
Gudmundsdottir E., Spilliaert R., Yang Q., Craik C.S., Bjarnason J.B.,
Gudmundsdottir A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 CGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRA--ITHPSWNS-- 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116 TIMNNDVILLKLASPAQYTTRISPVCLASSNEALTEGLICVTTGWGRLSGVGNVTPAHLQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57 CGGSLITPDWVLTAGHCISTSRTYQVVLGEHERGVEEGQEQVIPINAGDLFVHPKWNSMC 116
  Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176 QVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 LLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ---DSSGFHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TTEMBLrel. 01, Created)
01-NOV-1996 (TTEMBLrel. 01, Last sequence update)
01-NOV-2002 (TTEMBLrel. 21, Last annotation update)
Elastase precursor (EC 3.4.21.37) (Leukocyte elastase) (Lysosomal elastase) (Neutrophil elastase) (Bone marrow serine protease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gadus morhua (Atlantic cod).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                         "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-590(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28904 MW; C543F76957B2A7CE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 472.5; DB 1 Pred. No. 6.3e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_HS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEROPS, SOI.154; -.
MGD; MGI:1915118; Ela3b.
Interpro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31;
                                                                                                                                                                                                                                                                                                                                                                               EMBL; AK010149; BAB26734.1; -. EMBL; AK009129; BAB26092.1; -. HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hydrolase; Serine protease.
SEOUENCE 269 AA; 28904 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 38.7% Best Local Similarity 43.5% Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=8049;
                                                                                                                                                                                                                                                         Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEDULLASIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             092077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Kadota K., Marsuda H.A., Ashburner M., Batalov S., Casavant T., Pleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73 AAHCNVSPGRHFVVLGEYDRS-SNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132 QYTTRISPVCLASSNEALTEGLTCVTTGWG--RLSGVGNVTPAHLQQVALPLVTVNQCRQ 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 LGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
                                                                                                                                             MEDLINE=20464334; PubMed=11011764;
Spilliaert R., Gudmundsdottir A.;
Molecular Cloning of the Atlantic Cod Chymotrypsinogen B.";
Microb. Comp. Genomics 5:41-50(2000).
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
EMBL; AJ442521; CAB43766.1; -.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 263;
                          Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EF61B18A34EE5E7C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55.2%; Score 674.5; DB 13; 57.0%; Pred. No. 3e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190 YW-DSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHYMOTRYPSIN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SFC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_EER; 1.
Hydrolase; Serine protease; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                  Mances, corrections of the control of the control of the correction of the correction of the corrections of the corrections of the corrections of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correction of the correc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=C57BL/6J; TISSUE=TONGUE;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28175 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 127; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
2310074F01Rik protein.
ELA3B OR 2310074F01RIK.
                                                                                                                              IISSUE-PYLORIC CAECA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                       MEROPS; S01.152;
                                                 NCBI_TaxID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9CQ52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            090052
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

7;

15; Gaps

```
InterPro; IPR001314; Chymotrypsin.
                                                                                                                                                                                                                                                                                                                                          3est Local Similarity 43.1%
Matches 103; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                    269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=8255;
                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9W7P9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
  ò
                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                            ж
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN—C57BL/64; TISSUE—STOMACH;
MEDLINE—21085660; PubMed=11217851;
MEDLINE—21085660; PubMed=11217851;
MEDLINE—21085660; PubMed=11217851;
MEDLINE—21085660; PubMed=11217851;
Arakawa T., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Kondo S., Yamanaka I.,
Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Salto T., Okazaki Y., Golobori T., Bono H., Kasukawa T., Saito R.,
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
Kuchl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         117 NDIALIKLASPVDVSAIITPACVPDAEVLLANGAPCYVTGWGRLWTGGPIADA-LQQALL 175
                                                                                                                                                                                                                                                                                                                                                                                                                 120 NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVAL 179
                                                                                                                                                                                                                                                                                                                                                                                                   GGSLISQSWVVTAAHCNVSPGRHFVVLGEYD-RSSNAEPLQVLSVSRAITHPSWNSTTMN 119
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                4 LSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2001 (TrEMBLrel. 17, Last Sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
231007450181k protein.
ELA3B OR 231007450181K.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
           encoding two distinct psychrophilic elastases.";
Comp. Biochem. Physiol. 113B:795-801(1996).
-!- CATALYTIC ACTIVITY: HYDROLYSIS OF PROTEINS, INCLUDING ELASTIN
PREFERENTIAL CLEAVAGE: VAL-!-XAA > ALA-!-XAA.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLVTVNQCRQY -- WDSSITDSMICAGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13;
 "Isolation and characterization of two cDNAs from Atlantic cod
                                                                                                                                                                                                                                                  ACTIVATION PEPTIDE (POTENTIAL). ELASTASE.
                                                                                                                                                                                                                                                                                                                         83; Indels
                                                                                                                                                                                                                                                                          28533 MW; B786B52C71559E2E CRC64;
                                                                                                                                     ; Score 465.5; DB 1;
; Pred. No. 2.7e-34;
45; Mismatches 83.
                                                                                                       MEROPS; SOL.155; ...
InterPro; IPRO01314; Chymotrypsin.
InterPro; IPRO01254; Ser_protease_fry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                38.1%;
40.3%;
                                                                                    EMBL; U56956; AAB58350.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                          95; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                  1FON.
                                                                                                                                                                                                                                                                         266 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09D7T9
                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
Q9D7T9
g
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

```
Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weltz C., Whittaker C., Wilming L., Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       116 TIMNNDVTLIKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60 CGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRA--ITHPSWNS-- 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ---DSSGFHF 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176 QVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 QALLPVVDYEHCSRWNWWGLSVKTTMVCAGGDIQSGCNGDSGGPLNCPADNGTWQVHGV 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Elastase 4 (Fragment).

Parallchthys olivaceus (Flounder).

Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostom1;

Actinopterygii: Neopterygii: Teleostei: Euteleostei: Neoteleostei:

Acanthomorpha: Acanthopterygii: Percomorpha; Pleuronectiformes;

Pleuronectoidei: Paralichthyidae; Paralichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suzuki T., Srivastava A.S., Kurokawa T.;
- "Japanese ef flounder mRNA for elastrase 4 precursor.";
- Submitted (JUL-1999) to the EMBL/Genbank/DDBJ databases.
- I- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
- EMBL; ABOJ9758 BAA82370.1; - .
HSSP; P00761; IEPT.
                                                                                                                                                                                                                                                      Nature 409:685-690(2001).
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE TRYPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11; Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28977 MW; 9F43F769DDB2A7CF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38.0%; Score 464.5; DB 11;
43.1%; Pred. No. 3.4e-34;
                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; SOL 154; ...
MGD; MGI:1915118; Ela3b.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SWART; SW00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.18; Pred. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                      EMBL; AK008858; BAB25932.1;
HSSP; P05805; 1FON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hydrolase; Serine protease.
```

.,

```
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REALINE—2108566; PubMed=11217851;
RAWAI J. Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arawawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
Arawawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Samanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Isawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Alzawa K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Achriml L.M., Staubli F., Joshia B., Kochiwa H.,
Rochiml L.M., Staubli F., Zuzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Rusonstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
Rusonstein M.J., Bult C., Reficher C., Fujita M., Gariboldi M.,
Rusons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoebach C., Seya T., Shibata Y., Storch K.-F.,
Nymaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Nymaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65 ISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTL 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTV 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :|||:| :: : || | .: | | | ||||| | : ||| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| ||:| |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FHFCGGSL 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).

Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Butharia, Rodentia, Sciurognathi; Muridae, Murinae, Mus. NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13; Length 260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      185 NQCRQ--YWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQK-GNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 454.5; DB 13; Length
; Pred. No. 2.6e-33;
45; Mismatches 80; Indels
                                                                                                                                                                                                                                                                                                                                                                                                     260 AA; 27942 MW; 61883CD1B6A66075 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                     Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPPIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LHIS; UNKNOWN_1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease.
NON_TER 1
SEQUENCE 260 AA; 27942 MW; 61883CDIB6A6
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 0910001000 (TrEMBLrel. 21, 0910001608Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 409:685-690(2001).
EMBL; AK003074; BAB22549.1;
HSSP; P00763; 1DPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.997; -. MGD; MGI:88558; Ctrl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9DC82;
Q9DC82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
Q9DC82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
    ACCOCCOS ON THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BACK TO THE BA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
5
                                                                                                                                                                                                                                                         110 HPSWNST-TMNNDVTLLKLASP-AQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVG 167
                                                                                                                                                                                                                                                                                                                                            168 NYTPAHLQQVALPLVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWV 227
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                  5
                                                                                                                                                                        Length 164;
                                                                                                                               17707 MW; 83791FD829ABEDD6 CRC64;
                                                                                                                                                                        Score 447; DB 11
Pred. No. 7e-33;
                                                                                                                                                                                                                    9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: December 20, 2002, 15:18:53 Job time: 29.6087 secs
InterPro; IPR001254; Ser_protease_Try. Pfam; PF00089; trypsin; 1. SMART; SM00020; Tryp_SPc; 1. PROSITE; PS50240; TRYPSIN_DOM; 1. PROSITE; PS00135; TRYPSIN_SER; 1. Hydrolase; Serine protease. Següence 164 AA; 17707 MW; 83791FD
                                                                                                                                                                        Query Match 36.6%;
Best Local Similarity 69.4%;
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  228 LIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128 LIGI 131
```

mus musculu canis famil rattus norv sus scrofa mus musculu

salar

salmo

gallus gall gallus gall homo sapien canis famil gallus gall

ALIGNMENTS

002844 P06871 P06871 P00762 P00762 P97435 P97435 P980628 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P980629 P9806

TRY3_SALSA
MCT7_MOUSE
TRY1_CARFA
TRY1_RAT
TRY1_RIG
ENTK_MOUSE
TRY1_CHICK
TRY2_CHICK
TRY2_CHICK
TRY2_CHICK
TRY2_CHICK
TRY3_CHICK
TRY3_CHICK
TRY3_CHICK
TRY3_CHICK
TRY3_CHICK
TRY3_CHICK
TRY3_CHICK

```
238
273
246
246
275
1069
248
1019
333
492
31.5
31.5
31.4
31.3
31.3
31.3
31.0
384.5
3881.5
3883.5
382.5
382.3
382.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
3823.3
   34
335
337
44
44
54
54
54
                                                                                                                                                                                                                                       December 20, 2002, 15:12:58 ; Search time 7.91304 Seconds (without alignments) 1210.790 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                        US-09-856-319B-2_COPY_1_231
1221
1 MLLLSLTLSLTLSLVLLGSSWGCG.......GDSGGPLVCQKGNTWVLIGI 231
                                 GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                           - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                               OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                  Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

S	Description	. –	P04813 canis famil	gadus		rattu	P00767 bos taurus	9	P00766 bos taurus	P08419 sus scrofa	_	l bos t	_	1 rattu	рошо	homod	mus m	bos t	рошо	homo	ratto	P81286 ovis aries	Q9es87 rattus norv	7 home		P12545 macaca mula	~	Q28153 bos taurus	P06867 sus scrofa	Q99895 homo sapien	P20918 mus musculu	P80010 equus cabal	~	Q05319 drosophila
SUMMARIES	ΩI		CTR2_CANFA	CTRA_GADMO	CTRB_HUMAN	CTRB_RAT	CTRB_BOVIN	CTRB_GADMO	CTRA_BOVIN	EL2_PIG	EL3B_HUMAN	EL2_BOVIN	EL2A_HUMAN	EL2_RAT	EL2B_HUMAN	EL3A_HUMAN	EL2_MOUSE	CAC3_BOVIN	PSS8_HUMAN	TMS3_HUMAN	CLCR_RAT	PLMN_SHEEP	PSS8_RAT	PLMN_HUMAN	PSS8_MOUSE	PLMN_MACMU	ENTK_BOVIN	EL1_BOVIN	PLMN_PIG	CLCR_HUMAN	PLMN_MOUSE	PLMN_HORSE	TRYT_MERUN	STUB_DROME
	DB	!	-	-	-	1	7		-	٦	-	-	Н	Н	-	-	Н	ч	Н	Н	Н		Н	Н	-	-	7	-	-	Н	-	-	П	7
	Length	,	263	263	263	263	245	245	245	269	270	269	269	271	269	270	271	253	343	454	268	343	342	810	342	810	1035	366	790	268	812	338	270	786
đ	Query Match	6	8	7.	ė.	54.9	4.	4	m	œ	37.1	7	9	35.9	വ	4.	4	33.6	33.6	ω.	e	33.1	2	3	2	~	'n	ä	ς.	ď.	Η.	31.9	4	31.6
	Score	_	714.5	701.5	689.5	670.5	666.5	664.5	657.5	472	453.5	453	445	438	427	420.5	415	410.5	410.5	408	407.5	404	398.5		396.5	396	395.5	392		390.5	æ	389	388	386
	Result No.	Ä	7	e	4	'n	9	7	80	đ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	59	30	31	32	33

```
CTRA_GADMO
                                       ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
DISULFID
                                                                                                                                                    DISULFID
                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
CTRA_GADMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD111D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD11D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1D
DD1
  FT FT FT FT S
                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                     GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                         121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                              61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                 121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                            Gaps
                                                                                                                                                                                                  9
                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       c. Natl. Acad. Sci. U.S.A. 80:7486-7490(1983).
CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
Phe-|-Xaa, Leu-|-Xaa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE-84170253; PubMed-6584866;
Pinsky S.D., Laforge K.S., Luc V., Scheele G.;
Tidentification of cDNA clones encoding secretory isoenzyme forms: sequence determination of canine pancreatic prechymotrypsinogen 2 mRNA.";
                                                                                                                                                                                1 MILLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-AUG-1987 (Rel. 05, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2psinogen 2 precursor (EC 3.4.21.1).
Canis familiaris (Dog)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                         231
                                                                                                                                                                                                                                                                                                                                                                                                                                              181 LVTVNQCRQYWGSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                              Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                         181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                            Indels
                       3F629F02FA6DDFB4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHYMOTRYPSIN 2, A CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHYMOTRYPSINGGEN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SUBCELLULAR LOCATION: Extracellular.
                                                     Score 1214; DB 1;
                                                                                                          0; Mismatches
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOW; 1.
PROSITE; PS00134; TRYPSIN_LIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-AUG-1987 (Rel. 05, Created)
                    28002 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; .K01173; AAA30841.1; -.
                                                                99.4%;
                                                                                                            Matches 230; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A21195; A21195.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P00766; 1ACB.
                       264 AA;
                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P00766; 1AC
MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTR2_CANFA P04813;
DISULFID
                    SEQUENCE
                                                                Query Match
                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTR2_CANFA
                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
FT
                                                                                                                                                        ò
                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASGELINE-92111252; PubMed=1764912;
ASGELINE-92111252; PubMed=1764912;
ASGELINE-92111252; PubMed=1764912;
ASGELINE-91 and kinetic properties of chymotrypsin from Atlantic cod (Gadus morhua). Comparison with bovine chymotrypsin.";
Comp. Biochem. Physiol. 998:327-335(1991).
-! CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostei; Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MAFLWLLSCFALLGTAFGCGVPAIQPVLSGLSRIVNGEDAVPGSWPWQVSLQDSTGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gadus morhua (Atlantic cod).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Atlantic cod cDNA encoding a psychrophilic chymotrypsinogen.";
Biochim. Biophys. Acta 1219:211-214(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleos
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
                                                                                                                                                                                                                                                                                                                                                    Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gudmundsdottir A., Oskarsson S., Eakin A.E., Craik C.S.,
CHYMOTRYPSIN 2, B CHAIN.
CHYMOTRYPSIN 2, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                            2A2F449D813B3961 CRC64;
                                                                                                                                                                                                                                                                                                                                              58.5%; Score 714.5; DB 1;
56.7%; Pred. No. 9.7e-55;
1ve 35; Mismatches 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-ED-2002 (Rel. 41, Last annotation update)
Chymotrypsin A precursor (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=94368860; PubMed=8086467;
                                                                                                                                                                                                                                                                                          27787 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 19-30 AND 34-49.
                                                                                                                                                                                                                                                                                                                                                 Query Match 58.5%
Best Local Similarity 56.7%
Matches 131; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
        164
263
75
75
120
213
140
76
219
200
238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Pyloric caeca;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Pyloric caeca;
                                                                                                                                                                                                                                                                                            263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bjarnason J.B.;
```

```
RESULT 5
CTRB_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132 QYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYW 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72 TAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPA 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12 LLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVV 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 LFRRTYGGGRPAISPVITGYSRIVNGEEAVPHSWSWQVSLQDQTGFHFCGGSLINENWVV 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                   InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
InterPro; IPR00125; CHYMONTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_ERE; 1.
PROSITE; PS00135; TRYPSIN_ERE; 1.
                                                                                                                                                                                                                                                                                                                                                           SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Pancreas;
MEDLINE-89134264; PubMed-2917002;
Tomita N., Izumoto Y., Horil A., Dol S., Yokouchi H., Ogawa M.,
Mori T., Matsubara K.;
"Molecular cloning and nucleotide sequence of human pancreatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57; Indels
                                                                                                                                                                                                                                                                                                                                                         (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                  CHYMOTRYPSIN A.
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57.5%; Score 701.5; DB 1
58.6%; Pred. No. 1.3e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Cfymotrypsinogen B precursor (EC 3.4.21.1).
CTRB1 OR CTRB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33; Mismatches
  (do.
email to license@isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                        BY
BY
BY
BY
BY
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28294 MW:
                                         EMBL; X78490; CAA55242.1; -. HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prechymotrypsinogen cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                  263
75
120
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46
263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                        MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTRB_HUMAN
P17538;
or send an
                                                                                                                                                                                                                                                                                                                                                                                                ACT_SITE
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTRB_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GGSLISEDWVYTAAHCGVRTS-DVVVAGEFDQGSDEENIQVLKIAKVFKNPKFSILTVNN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                     Strausberg R.;
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHYMOTRYPEIN B, CHAIN.
CHYMOTRYPEIN B, B CHAIN.
CHYMOTRYPEIN B, C CHAIN.
CHANGE RELAY SYSTEM (BY SIMILARITY).
CHANGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 DITLLKLATPARFSQTVSAVCLPSADDDFPAGTLCATTGWGKTKYNANKTPDKLQQAALP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LESNAECKKSWGRRITDVMICAGASGVSSCMGDSGGPLVCQKDGAWTLVGI 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.4e-52;
hes 67; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY.
4C1C055A490B8701 CRC64;
Biophys. Res. Commun. 158:569-575(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHYMOTRYPSINGEN B.
                                                                                               Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.5%; Score 689.5; 55.4%; Pred. No. 1.4
                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PP00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SWART; SW00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 B
27870 MW;
                                                                                                                                                                                                                                                                                 EMBL; BC005385; AAH05385.1; --
PIR; A31299; A31299.
HSSP; P00766; ICHG.
MEROPS; S01.152; --
Genew; HGMC: 2521; CTRB1.
MIM; 118890; --
                                                                                                                                                                                                                                                                     EMBL; M24400; AAA52128.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
154
186
209
263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity
Matches 128; Conserv
                          SEQUENCE FROM N.A.
                                         TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19
34
167
75
120
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
CHAIN
CHAIN
CHAIN
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
```

```
120 DITLLKLATPAQFSETVSAVCLPNVDDFPPGTVCATTGWGKTKYNALKTPEKLQQAALP 179
                        181 LVTVNQCRQYWDSSITDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                          MEDLINE-68238908; PubMed-5649671;
                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                STANDARD;
                                                                                                                                                                                                                          Bovidae; Bovinae; Bos.
                                                                                                                                                                                        Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                      NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                             trypsinogen.
                                                                                                             CTRB_BOVIN
P00767;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
  g
                          ð
                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNN 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 DVTLLKLASPAQYTTRISPVCLASSNEALTEGLICVTTGWGRLSGVGNVTPAHLQQVALP 180
                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MAFLWLVSCFALVGATFGCGVPTIQPVLTGLSRIVNGEDAIPGSWPWQVSLQDKTGFHFC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFC 60
                                                                                                                                                                                                 "Isolation and sequence of a rat chymotrypsin B gene.";
J. Biol. Chem. 259:14265-14270(1984).
-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHYMOTRYPSIN B, A CHAIN.
CHYMOTRYPSIN B, B CHAIN.
CHYMOTRYPSIN B, C CHAIN.
CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
CHARGE RELAX SYSTEM (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                    MEROPS, SOL.152; --
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001354; Ser_protease_Try.
InterPro; IPR001254; Ser_protease_Try.
PRIMTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPC; 1.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LSS: 1.
PROSITE; PS00135; TRYPSIN_ERS; 1.
Hydrolase; Serine protease; Digestion; Pancreas; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            =
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54.9%; Score 670.5; DB 1; Length 263; 53.2%; Pred. No. 6.1e-51;
                                                                                                                                      [1]
SEQUENCE FROM N.A.
MEDLINE=85054881; PubMed=6209274;
Bell G.I., Quinto C., Quiroga M., Valenzuela P., Craik C.:
Rutter W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAFDBACF8C4DA6D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHYMOTRYPSINOGEN B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>:</u>
=
-
-
                                                                                                                                                                                                                             - CATALILIA CALLI-Xaa.
Phe-1-Xaa, Leu-1-Xaa.
- SUBCELLUAR LOCATION: Extracellular.
- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SI.
                                   01-APR-1988 (Rel. 07, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsinogen B precursor (EC 3.4.21.1).
  263 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35; Mismatches
   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ::
::
<del>::</del>
                          (Rel. 07, Created)
(Rel. 07, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27849 MW;
                                                                                                                                                                                                                                                                                                                                                                                   EMBL; K02298; AAA98732.1; -.
  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 123; Conservative
                                                                                       Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR; A22658; KYRTB.
HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19
19
34
167
75
120
130
19
104
1186
203 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                          NCBI_TaxID=10116;
                          01-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
Smillie L.B., Furka A., Nagabhushan N., Stevenson K.J., Parkes C.O.; "Structure of chymotrypsinogen B compared with chymotrypsinogen A and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : || || : | || || : : | TS-DVVVAGEFDQGLETEDTQVLKIGKVFKNPKFSILTVRNDITLIKLATPAQFSETVS 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 218:343-346(1968).

-!- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa, Phe-|-Xaa, Leu-|-Xaa

-!- Phe-|-Xaa, Leu-|-Xaa.

-!- SUBCELLULAR LOCATION: Extracellular.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
-!- DATABASE: NAME-Worthington enzyme manual;
WWW-"http://www.worthington-biochem.com/manual/C/CHY.html".
PIR; A00955; KISOB.
HSSP; P00766; LACB.
MEROPS; S01.152; --
                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25755 MW; 678016446FF5FEB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54.6%; Score 666.5; DB 1; 57.3%; Pred. No. 1.3e-50; iive 28; Mismatches 62;
                                                                                                                                                                                          21-JUL-1986 (Rel. 01, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Chymotrypsinogen B (EC 3.4.21.1).
                                                                                                                               245 AA
                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE, DISULFIDE BONDS, AND ACTIVE SITE.
```

1;

```
61 RT-YHRVIVGEHDKASD-ENIQILKPSMVFTHPKWDSRTINNDISLIKLASPAVLGTNVS 118
                                                                                                        79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTMNDVTLLKLASPAQYTTRIS 138
                                                                                 PVCLASSNEALTEGLTCVTTGWG--RLSGVGNVTPAHLQQVALPLVTVNQCRQYW-DSSI 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF CHYMOTRYPSINOGEN.
MEDLINE-70177557; PubMed-5442169;
Freer S.T., Kraut J., Robertus J.D., Wright H.T., Xuong N.H.;
"Chymotrypsinogen: 2.5-A crystal structure, comparison with alpha-
chymotrypsin, and implications for zymogen activation.";
Biochemistry 9:1997-2009(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       electrophoresis.
A.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE, AND DISULFIDE BONDS.
MEDLINE-67183948; PubMed-5972866;
Meloun B., Kluh I., Kostka V., Moravek L., Prusik Z., Vanacek J.,
Keil B., Sorm F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alpha-chymotrypsin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Philos. Trans. R. Soc. Lond., B, Biol. Sci. 257:67-76(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smillie L.B., Hartley B.S.; "Histidine sequences in the active centres of some 'serine'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-69106266; Pubmed-5764436;
Blow D.M., Birktoft J.J., Hartley B.S.;
"Role of a buried acid group in the mechanism of action
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-72035052; PubMed-4399050;
Birktoft J.J., Blow D.M., Henderson R., Steitz T.A.;
"I. Serine proteinases. The structure of alpha-chymot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Amino-acid sequence of bovine chymotrypsinogen-A.";
Nature 201:1284-1287(1964).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Covalent structure of bovine chymotrypsinogen A.";
Biochim. Biophys. Acta 130:543-546(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE, DISULFIDE BONDS, AND ACTIVE SITE.
MEDLINE=67181721; PubMed=5971783;
Brown J.R., Hartley B.S.;
"Location of disulphide bridges by diagonal paper.
The disulphide bridges of bowine chymotrypsinogen.
Biochem. J. 101:214-228(1966).
                                                                                                                                                                                     21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                               196 TDSMICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                          245 AA
                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                            Chymotrypsinogen A (EC 3.4.21.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-67181723; PubMed-5971785;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochem. J. 101:232-241(1966).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 221:337-340(1969).
                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X-RAY CRYSTALLOGRAPHY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus (Bovine)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID-9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REVISION TO 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hartley B.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chymotrypsin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTIVE SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteinases
                                                                                                                                                                                                                                                                                                        CTRA_BOVIN
P00766;
                                                                                                                                                                                                                                                                                         CTRA_BOVIN
                                                                                                                                                                                                      177
                                                                                 139
                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                          g
                                                                                 à
                                                                                                                     g
                                                                                                                                                               õ
                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV 78
                                                                                                                                                                                               01-0CT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Chymotrypsin B (EC 3.4.21.1).
Gadus morbuu (Atlantic cod).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii, Neopterygii; Teleostei; Euteleostei;
Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
MCBI_TaxiD=8049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Leth-Larsen R., Asgeirsson B., Thorolfsson M., Noerregaard-Madsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase; Serine protease; Digestion; Pancreas; Zymogen.
CHAIN
16 245 CHYMOTRYPSIN B, A CHAIN.
ACT SITE 57 57 CHARGE RELAX SYSTEM (BY SIMILARITY).
ACT_SITE 101 101 CHARGE RELAX SYSTEM (BY SIMILARITY).
ACT_SITE 195 195 CHARGE RELAX SYSTEM (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Structure of chymotrypsin variant B from Atlantic cod, Gadus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QVT -> VIS (IN REF. 2).
S -> T (IN REF. 2).
PW -> Y (IN REF. 2).
74FE0D425517AB02 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54.4%; Score 664.5; DB 1
58.3%; Pred. No. 1.9e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                          245 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34; Mismatches
199 MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypain; 1.
PRINTS; PR00722; CHYMOTRYPEIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Blochim. Blophys. Acta 1297:49-56(1996)
                       180 MICAGASGVSSCMGDSGGPLVCQKNGAWTLAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-92111252; PubMed-1764912;
                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-96439045; PubMed-8841380;
                                                                                                                                                                              01-OCT-1996 (Rel. 34, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26260 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-12 AND 16-31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126; Conservative
                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57
101
195
195
121
121
201
201
220
                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Pyloric caeca;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 caeca;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P00766; 1CHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEROPS; S01.152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Pyloric
                                                                                                                                      CTRB_GADMO
P80646;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hoejrup P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACT_SITE
ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                               RESULT 7
CTRB_GADMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                            ALD DE TALLE TETTE TETTE DE LA DESCRICA DE LA DESCRICA DE LA DEL COLOR DE LA DELLA DE LA DELLA DE LA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA DELLA D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
å
                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
```

ŏ

h Tu

```
139 PVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQVALPLVTVNQCRQYWDSSITDS 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79 SPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTIMNNDVTLLKLASPAQYTTRIS 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19 CGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSGFHFCGGSLISQSWVVTAAHCNV 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25666 MW; 91A9F28E2F3E3142 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 53.8%; Score 657.5; DB 1;
Best Local Similarity 54.9%; Pred. No. 7.5e-50;
Matches 117; Conservative 37; Mismatches 58;
 CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180 MICAGASGVSSCMGDSGGPLVCKKNGAWTLVGI 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MICAGGAGASSCQGDSGGPLVCQKGNTWVLIGI 231
 ACT_SITE
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HELIX
SEQUENCE
                                                                                                 HELIX
STRAND
TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAND
TURN
TURN
STRAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
EL2_PIG
  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                             resolution.
                                                                                    X-RAY CRYSTALLOGRAPHY (1.68 ANGSTROMS) OF ALPHA-CHYMOTRYPSIN.
MEDLINE-86011575; PubMed=4046030;
Tsukada H., Blow D.M.;
"Structure of alpha-chymotrypsin refined at 1.68-A resolution.";
J. Mol. Blol. 184:703-711(1985).
-:- CATALYTIC ACTIVITY: Preferential cleavage: Tyr-|-Xaa, Trp-|-Xaa,
                                                                                                                                                    Phe-|-Xaa, Leu-|-Xaa.
-!- SUBCELLULAR LOCATION: Extracellular.
-!- SINILARITY: BELONGS TO PEPTIDASE FAMILY SI.
-!- DATABASE: NAME-MOOTHAINGTON enzyme manual;
-- WWW-"http://www.worthington-blochem.com/manual/C/CHY.html".
          X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF GAMMA-CHYMOTRYPSIN. MEDLINE-82078042; PubMed-6914398; Cohen G.H., Silverton E.W., Davies D.R.; Refined crystal structure of gamma-chymotrypsin at 1.9-A reComparison with other pancreatic serine proteases."; J. Mol. Biol. 148:449-479(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Digestion; Pancreas; Zymogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHYMOTRYPSIN A, A CHAIN.
CHYMOTRYPSIN A, B CHAIN.
CHYMOTRYPSIN A, C CHAIN.
CHARGE RELAY SYSTEM.
CHARGE RELAY SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEROPS; S01.001; -.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4ydrolase; Serine protease;
3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00020; Tryp_SPc; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
146
245
57
102
                                                                                                                                                                                                       PIR) A009522; KYBOA...
PDB, 2CGA, 15-RPR-90.
PDB, 2CGA, 15-RPR-90.
PDB, 5CHA, 16-CCT-87.
PDB, 1CHO, 16-CCT-87.
PDB, 1CHO, 16-CCT-97.
PDB, 2GCH, 15-CCT-90.
PDB, 3GCH, 15-CCT-90.
PDB, 5GCH, 15-CCT-90.
PDB, 5GCH, 15-CCT-90.
PDB, 6GCH, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCT, 15-CCT-91.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-93.
PDB, 1GCD, 21-CCT-97.
PDB, 1CCD, 23-CCT-97.
PDB, 1CCD, 21-CCT-97.
PDB, 1CCD, 23-CCT-97.
PDB, 1CCT-97.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16
149
57
102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAIN
                                                                   J.
```

ä

Gaps

ï

Length 245; Indels 119

.; .**a.** 

```
셤
                                                                                                                                                                    ò
                                                                                                                                                                                             셤
                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                    g
                                                           ŏ
                                                                                  셤
                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
                                                                                                                                                                                                                                                                                                                                  "Molecular cloning and expression in Escherichia coli of a cDNA encoding human pancreatic elastase 2.";
-1. Blochem. 102.1555-1563(1987).
-1. FUNCTION: ACTS UPON ELASTIN.
-1. CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-|-Xaa, Hydrolyzes elastin.
-1. SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                 -i- TISSUE SPECIFICITY: PANCREAS.
-i- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                        Kawashima I., Tani T., Shimoda K., Takiguchi Y.; "Characterization of pancreatic elastase II cDNAs: two elastase II mRNAs are expressed in human pancreas.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                            MEDLINE-88198076; PubMed-2834346;
Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N.,
Shimada Y., Ozawa T., Mikayama T., Iijima H., Ishida A., Sato Y.,
Tamai Y., Tanaka J., Ikenaga H.;
                                                                                                              Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BAC6FE69AF4DDE56 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY
(BY
(BY
                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
L -> S (IN REF. 2).
N -> K (IN REF. 2).
S -> Y (IN REF. 2).
C -> V (IN REF. 2).
C -> V (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTIVATION PEPTIDE.
                                     01-AUG-1988 (Rel. 08, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PRO0722; CHYMOTRPEIN.
SMART; SM00020; Tryp_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00144; TRYPSIN_LOM; 1.
PROSITE; PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Zymogen; Signal.
 269 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P00763; IDPO.
MEROPS; SOL.155; -.
Interpro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                               MEDLINE-87217962; PubMed-3646943;
                           08, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M16651; AAA31027.1; -.
EMBL; D00237; BAA00166.1; -.
PIR; A26823; A26823.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28699
 STANDARD;
                                                                                                                                                                                                                                     DNA 6:163-172(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 212
10
118
132
172
202
269 AA;
                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                              Sus scrofa (P1g)
                                                                                                                                     NCBI_TaxID=9823;
                          01-AUG-1988
01-AUG-1988
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROPEP
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
```

```
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-8928996; PubMed-2737288;
Wendorf P., Geyer R., Sziegoleit A., Linder D.;
"Localization and characterization of the glycosylation site of human
                                                                                                                                                       N - - NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                          59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                        Gaps
                                                                         28
                                                                                                                                                                                                                                                                   177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                    pancreatic elastase 1.";
FEBS Lett. 249:275-278(1989).
-!- FUNCTION: EFFICIENT PROTEASE WITH ALANINE SPECIFICITY BUT ONLY
LITTLE ELASTOLYTIC ACTIVITY.
                                                                                          2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostom1;
                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Moulard M., Kerfelec B., Mallet B., Chapus C.; "Identification of a procarboxypeptidase A-truncated protease blary complex in human pancreatic juice."; FEBS Lett. 250:166-170(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Pancreas;
MEDLINE-88087253; PubMed-2826474;
MEDLINE-808087253; PubMed-2826474;
Tani T., Ohsumi J. Mita K., Takiguchi Y.;
"Identification of a novel class of elastase isozyme, human pancreatic elastase III, by cDNA and genomic gene cloning.";
J. Biol. Chem. 263:1231-1239(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protease E determined
      Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 94-164, AND CARBOHYDRATE-LINKAGE SITES ASN-114
                                        84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strausberg R.; Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                EL3B_HUMAN STANDARD; PRT; 270 AA. P0861; P11423; P01-NOV-1988 (Rel. 09, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Elastase IIIB precursor (EC 3.4.21.70) (Protease
        Score 472; DB 1;
Pred. No. 8.9e-34;
2; Mismatches 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-88000545; PubMed-3477287;
Shen W., Fletcher T.S., Largman C.;
"Primary structure of human pancreatic psequence analysis of the cloned mRNA.";
Blochemistry 26:3447-3452(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Pancreas;
MEDLINE-89325560; Pubmed-2753124;
38.7%; Scor
45.6%; Pred
tive 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 4-270 FROM N.A.
                                     Matches 109; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SECUENCE OF 31-50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                     RESULT 10
```

```
Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 105; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           269 AA;
                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; S01.155;
                                                                                                                                                                                                                                                                                                                                                              TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                               NCBI_TaxID=9913;
                                                                           EL2_BOVIN
Q29461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                   Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                               HIDDAG BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY OCCOORD BERNARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8,
                                                                                                SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                 between the Swiss Institute of Bioinformatics and the EMBL outstation-
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRA--ITHPSWNST 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   117 CVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNETPCYITGWGRLYTNGPL-PDKL 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117 TM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHL 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         175 QQVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 LLLSLTLSLYLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--FH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELASTASE SUBFAMILY
CATALYTIC ACTIVITY: Preferential cleavage: Ala-|-Xaa. Does not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY).
SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37.1%; Score 453.5; DB 1; Length 270; 42.5%; Pred. No. 3.5e-32; ive 36; Mismatches 87; Indels 15
                                   -i - SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBE-i - CAUTION: Was originally (Ref.5) thought to be elastase 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hydrolase; Serine protease; Zymogen; Signal; Glycoprotein. SIGNAL 1 15 OR 16 (POTENTIAL). PROPEP 16 28 ACTIVATION PEPTIDE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FN. SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

N-LINED (GLCNAC. . .).

/FTId=CAR_000212.

R -> G (IN REF. 3).

M -> R (IN REF. 3).

M -> R (IN REF. 1).

M ISSING (IN REF. 1).

M SSING (IN REF. 5).

M -> R (IN REF. 1).

M SSING (IN REF. 5).

M -> P (IN REF. 3).

M -> P (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHARGE RELAY SYSTEM (BY
CHARGE RELAY SYSTEM (BY
CHARGE RELAY SYSTEM (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY. PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ELASTASE IIIB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Prints; PR00099; trypsin; 1.
SMART; SM00020; Tryp_SPc; 1.
PROSITE; PS00040; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                                                                   EMBL; M16630; AAA36482.1; -.
EMBL; BC005216; AAH05216.1; -.
FMBL: M18692; AAA58454.1; -.
                                                                                                                                                                                                                                                                                               EMBL; M18692; AAA58454.1; -...
PIR; B29934; B29934.
PIR; A27206; A27206.
PIR; S04499; S04999.
PIR; S04490; S04490.
HSSP; P05805; IFON.
MENOPS; S01.205; -...
Glycosuitedb; P08861; -...
SWISS-2DPAGE; P08861; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29293 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 42.5
nes 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genew; HGNC:15945; ELA3B.
                  nydrolyse elastin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
ACT_SITE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                  This
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-98079203; PubMed-9418008; Gestin M., le Huerou-Luron I., Wicker-Planquart C., le Drean G., Chaix J.C., Puigserver A., Guilloteau P.; Bovine pancreatic preproelastases I and II: comparison of nucleotide and amino acid sequences and tissue specific expression."; comp. Biocham. Physiol. 1181.81-187(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -i- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-|-Xaa. Hydrolyzes elastin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- TISSUE SPECIFICITY: PANCREAS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH
                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY)
SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY, ACTIVATION PEPTIDE (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8343B97062CF267C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELASTASE 2.
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
CHARGE RELAY SYSTEM (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37.1%; Score 453; DB 1; 43.9%; Pred. No. 3.9e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
Pfam. PP00089; Trypsin. 1.
PRNTS: PR00722; CHYMOTRYPSIN.
SWART; SW00020; Tryp_SPc; 1.
PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LHS; 1.
PROSITE; PS00135; TRYPSIN_ERR; 1.
PROSITE; PS00135; TRYPSIN_ERR; 1.
Hydrolase; Serine protease; Zymogen; Signal.
                                                        01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
   269 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY.
SIMILARITY.
SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.9%; Pred. No. 3.9e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28856 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; X97635; CAA66231.1; -. HSSP; P00766; 1CHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
   STANDARD;
                                                                                                                                                                                                                                                                                                 Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
```

œ

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 between the Swiss Institute of Bioinformatics and the Smis Constitution. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration
117 AQGNDIALLKLASSVPLTDKIQLGCLPAAGTILPNNYVCYVTGWGRLQSNG-ALPDILGO 175
                                                                   -- NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                       | :| | :| | : | | : | | 134 | 135 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strausberg R.;
Submitted (ApR-2001) to the EMBL/GenBank/DDBJ databases.
-I. FUNCTION: ACTS UPON ELASTIN.
-I. CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and phe-|-xaa. Hydrolyzes elastin.
-!- SUBCELULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: PANCHEAS.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY $1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kawashima I., Tani T., Shimoda K., Takiguchi Y.;
"Characterization of pancreatic elastase II cDNAs: two elastase II
mRNAs are expressed in human pancreas.";
DNA 6:163-172(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                            177 VALPLVTVNQCR--QYWDSSITDSMICAGGAG-ASSCQGDSGGPLVCQKGN-TWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-88198076; Pubmed-2834346;
Shirasu Y., Yoshida H., Matsuki S., Takemura K., Ikeda N., Shim
Ozawa T., Mikayama T., Iijima H., Ishida A., Sato Y., Tamai Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tanaka J., Ikenaga H.; "Molecular cloning and expression in Escherichia coli of a cDNA encoding human pancreatic elastase 2."; J. Blochem. 102.1555-1563(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-88107669; PubMed-3427074;
Fletcher T.S., Shen W.F., Largman C.;
"Primary structure of human pancreatic elastase 2 determined la sequence analysis of the cloned mRNA.";
Biochemistry 26:7256-7261(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thomas D.;
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                               Elastase 2A precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-87217962; PubMed-3646943;
                                                                                                                                                                                                                                                                                                                                                 P08217; 014243;
01-N02-1988 (Rel. 08, Created)
01-N05-1988 (Rel. 08, Last seq
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M16631; AAA52374.1; -.
                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                           EL2A_HUMAN
                     57
                                                                   119
                                                                                                              q
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                            ò
```

```
N--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117 SKGNDIALLKLANPVSLTDKIQLACLPPAGTILPNNYPCYVTGWGRLQTNGAV-PDVLQQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Muriņae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI 231
                                                                                                                                                                                                                                                                                                                                                                                                           ACTIVATION PEPTIDE.
ELASTASE 2A.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
C -> V (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDILINE-821821; MEDILINE-82182967; PubMed-6918221; MCDonald R.J., Swift G.H., Quinto C., Swain W., Pictet R.L., Nikovits W., Rutter W.J.; Nikovits W., Rutter W.J.; Primary structure of two distinct rat pancreatic preproelastases determined by sequence analysis of the complete cloned messenger ribonucleic acid sequences."; Biochemistry 21:1453-1463(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36.4%; Score 445; DB 1; Length 269; 43.9%; Pred. No. 1.9e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A2E05143EFF4987C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
21-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2 precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                           PROSITE; PS50240; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE: PS00135; TRYPSIN_SER; 1.
Hydrolase; Serine protease; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                             InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28;
                                                                                                                                                                                                                        Pfam; PF00089; LYPS1n; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; TRYP_SPC; 1.
                                        EMBL; AL512883; CAC42421.1; -.
EMBL; BC007031; AAH07031.1; -.
PIR; A27432; A27432.
PIR; B26823; B26823.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28888 MW;
AAA52380.1; -.
BAA00165.1; -.
M16652; AAA52380.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                   HSSP; P00772; 1ELG.
MEROPS; S01.155; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10116;
                       D00236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EL2_RAT
                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                  PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
EL2_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
```

.; 6 178 GRLLVVDYATCSSASWWGSSVKTNMVCAGGDGVTSSCNGDSGGPLNCQASNGQWQVHGI 236

셤

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 TCGGSLVANNWVLTAAHCISNSRTYRVLLGRHSLSTSESGSLAVQVSKLVVHEKWNAQKL 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 n--NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MIRTLLLSALVAG-ALSCGYPTYEVQHDVS-RVVGGQEASPNSWPWQVSLQYLSSGKWHH 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177 VALPLVTVNQC - - RQYWDSSITDSMICAGGAG - ASSCQGDSGGPLVCQKGN - TWVLIGI 231
                                                                                     pancreas.";
J. Biol. Chm. 259:14271-14278(1984).
-!- FUNCTION: ACTS UPON ELASTIN.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-!-Xaa. Hydrolyzes elastin.
-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                               TISSUE SPECIFICITY: PANCREAS.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 LLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQD-SSG--FH
                                                                        'Structure of the two related elastase genes expressed in the rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY)
SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 271;
                                          Stary S.J., Quinto C., Lahaie R.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125C783B857B71E3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTIVATION PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 438; DB 1;
Pred. No. 7.8e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hydrolase; Serine protease; Zymogen; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protesse_Try.
Pram; PF00089; trypsin; 1.
PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM0020; Tryp_SPC; 1.
PROSITE: PS5040; TRYPSIN_DD; 1.
PROSITE: PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_ESR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35.9%; Score 438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELASTASE
                            MEDLINE-85054882; PubMed-6094548; Swift G.H., Craik C.S., Stary S.J
                                                                                                                                                                                                                                                                                                                                                              AAA98780.1; -.
AAA98780.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                            AAA98780.1; JOINED. AAA98780.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                          AAA98780.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28885 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41.88;
                                               Swirt G.H., Craik C.S., Sta
Rutter W.J., Macdonald R.J.
                                                                                                                                                                                                                                                                                                                                                EMBL; V01233; CAA24543.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA98780.1;
AAA98780.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1ELG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A00961; ELRTZ
HSSP; P00772: 1ELG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            271 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P00772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROPEP
                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

<del>..</del>

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 FCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVSRAITHPSWNSTTM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 LLLSLTLSLYLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQDSSG---FH 58
                                                                                                                                                                                                                                                                      buna 0:103-1/2(198/).
-!- FUNCTION: ACTS UPON ELASTIN.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Leu-|-Xaa, Met-|-Xaa and Phe-|-Xaa. Hydrolyzes elastin.
-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                    Kawashima I., Tani T., Shimoda K., Takiguchi Y.;

"Characterization of pancreatic elastase II cDNAs: two elastase II

mRNAs are expressed in human pancreas.";

DNA 6:163-172(1987).
                                                                                                                                                                                                                                                                                                                                       -1- TISSUE SPECIFICITY: PANCREAS.
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY
                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBL_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY).
SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 269;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EF3C3D88B6FEB1A0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHARGE RELAY SYSTEM
CHARGE RELAY SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTIVATION PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 427; DB 1;
Pred. No. 6.9e-30;
36; Mismatches 91
                                                                       01-AUG-1988 (Rel. 08, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Elastase 2B precursor (EC 3.4.21.71).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hydrolase; Serine protease; Zymogen; Signal.
                                269 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELASTASE 2B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Ser_protease_Try.
                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS, PROO722; CHYMOTRYPSIN.
SMART; SMOD020; Tryp_SPc; 1.
PROSITE; PS50240, TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_HIS; 1.
PROSITE; PS00135; TRYPSIN_HIS; 1.
                                                                                                                                                                                                        MEDLINE=87217962; PubMed=3646943;
                                                           08, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28936 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35.0%;
41.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M16653; AAA52381.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 41.09
Watches 98; Conservative
                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00089; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                       (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C26823; C26823.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
212
269 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P05805; 1FON.
                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; S01.206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
216
58
155
                                                                                                                    Homo sapiens
                                                          01-AUG-1988
                              EL2B_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
               EL2B_HUMAN
RESULT 14
                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
```

```
Search completed: December 20, 2002, 15:17:12
Job time : 8.91304 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                    119 N -- NDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAHLQQ 176
                                                                                                LITTLE ELASTOLYTIC ACTIVITY.
-!- CATALYTIC ACTIVITY: Preferential cleavage: Ala-|-Xaa. Does not hydrolyse elastin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1. ELASTASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
FUNCTION: EFFICIENT PROTEASE WITH ALANINE SPECIFICITY BUT ONLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Pancreas;
MEDLINE-89034017; PubMed-2460440;
Shirasu Y., Takemura K., Yoshida H., Sato Y., Iijima H.,
Shimada Y., Makayama T., Ozawa T., Ikeda N., Ishida A., Tamai Y.,
Matsuki S., Tanaka J., Ikenaga H., Ogawa M.;
Molecular cloning of complementary DNA encoding one of the human
pancreatic protease E 1sozymes.";
J. Biochem. 104:259-264(1988).
                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                          177 VALPLVTVNQCRQ--YWDSSITDSMICAGGAGA-SSCQGDSGGPLVCQKGN-TWVLIGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tani T., Ohsumi J., Mita K., Takiguchi Y.;
"Identification of a novel class of elastase isozyme, human
pancreatic elastase III, by CDNA and genomic gene cloning.";
J. Biol. Chem. 263:1231-1239(1988).
                                                                                                                                                                                                           EL3A_HUMAN STANDARD; PRT; 270 AA. P09093; Q9BRW4; P019MR-1989 (Rel. 10, Created) O1-FEB-1996 (Rel. 33, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Elastase IIIA precursor (EC 3.4.21.70) (Protease E).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M18700; AAA66350.1; --
EMBL; M18693; AAA66350.1; JOINED.
EMBL; M18694; AAA66350.1; JOINED.
EMBL; M18695; AAA66350.1; JOINED.
EMBL; M18696; AAA66350.1; JOINED.
EMBL; M18699; AAA66350.1; JOINED.
EMBL; M18699; AAA66350.1; JOINED.
EMBL; M18699; AAA66350.1; JOINED.
EMBL; M18699; AAA66350.1; JOINED.
EMBL; D00306; BAA00212.1; --
EMBL; BC005318; AAH05318.1; --
EMBL; A29934; A29934.
HSSP; P05805; IFON.
MEROPS; S01.154; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-88087253; PubMed-2826474;
                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. TISSUE-Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ISSUE-Prostate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                    a
                                                                          ò
                                                                                                            g
```

```
58 HFCGGSLISQSWVVTAAHCNVSPGRHFVVLGEYDRSSNAEPLQVLSVS--RAITHPSWNS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     116 TIM--NNDVTLLKLASPAQYTTRISPVCLASSNEALTEGLTCVTTGWGRLSGVGNVTPAH 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174 LQQVALPLVTVNQCRQ--YWDSSITDSMICAGGAGASSCQGDSGGPLVC-QKGNTWVLIG 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     116 SCVACGNDIALIKLSRSAQLGDAVQLASLPPAGDILPNKTPCYITGWGRLYTNGPL-PDK 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 MIRLLSSILLVAVASGYG-----PPSSHSSRVVHGEDAVPYSWPWQVSLQYEKSGSFY 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQRIVNGENAVLGSWPWQVSLQ-DSSG--F 57
                                                                                                                                                                                                                                                                                                                                                                                                        CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
CHARGE RELAY SYSTEM (BY SIMILARITY).
BY SIMILARITY.
PROBABLE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34.4%; Score 420.5; DB 1; Length 270;
40.7%; Pred. No. 2.5e-29;
Live 35; Mismatches 91; Indels 17;
                                                                                                                                                                                                                                                                                                                          OR 16 (POTENTIAL). ACTIVATION PEPTIDE (POTENTIAL).
                                                                                                                                                                                                                                                                                            Zymogen; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 576DDB255A4A118C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. . .)
I -> T (IN REF. 3).
MISSING (IN REF. 1).
K -> E (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                     ELASTASE IIIA.
Genew; HGNC:15944; ELA3A.
InterPro; IPR001254; ECHANCETYPSin.
InterPro; IPR001254; Ser_protease_Try.
Fram; PP00089; Lrypsin, 1.
PRINTS; PR00722; CHYMOTRYPSIN.
PRINTS; PS00120; TRYPSIN.
PROSITE; PS00134; TRYPSIN_DOM; 1.
PROSITE; PS00134; TRYPSIN_LSS; 1.
Hydrolase; Serine protease; Zymogen; Sig SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29474 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    114
63
106
174
270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188
213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             231 I 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235 V 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                ACT_SITE
ACT_SITE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sest Local
                                                                                                                                                                                                                                                                                                                                                           PROPEP
                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
             DOR NOOR CONTRACT OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
Sequence 363, App Sequence 363, App Sequence 363, App Sequence 363, App Sequence 363, App Sequence 363, App Sequence 363, App Sequence 363, App Sequence 242, App Sequence 2, App11 Sequence 2, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 2, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, App11 Sequence 1, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:

APPLICANT: Rosen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PAIOS

CURRENT APPLICATION NUMBER: US/09/925,297

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/VS00/05989

PRIOR PILING DATE: 2000-03-08

PRIOR PILING DATE: 1999-03-12

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 928

SOFTWARE: PATENTIN VEY: 2.0
                                                                                                                                                                                                                                                                                                                                                                                US-09-802-124-2
US-09-733-605-2
US-09-746-284-1
US-09-815-242-13998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80.1%; Score 133; DB 10;
86.2%; Pred. No. 2e-10;
           US-10-063-547-66
US-09-092-296-15
US-09-989-722-363
US-09-989-727-363
US-09-989-727-363
US-09-989-731-363
US-09-991-073-363
US-09-991-073-363
US-09-991-073-363
US-09-991-42-363
US-09-991-42-363
US-09-991-42-363
US-09-991-42-363
US-09-991-4363
US-09-991-4363
US-09-991-4363
US-09-991-4363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
US-09-991-456-363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-989-293A-177
US-10-063-547-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-989-722-177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-992-598-177
                                                                                                                                                                                                                                                                                                                                                            US-10-010-928-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 SLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 529, Application US/09925297 Patent No. US20020081659A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
US-09-888-615-96
; Sequence 96, Application US/0988615
; Patent No. US20020064856A1
; GENERAL INFORMATION:
; APPLICANT: PLOWMAN, GREGORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WHYTE, DAVID
CAENEPEEL, SEAN
CHARYDCZAK, GLEN
MANNING, GERARD
SUDARSANAM, SUCHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
us-09-925-297-529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-925-297-529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 529
LENGTH: 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 529, App
Sequence 643, App
Sequence 2, Appl1
Sequence 2, Appl1
Sequence 12, Appl1
Sequence 12, Appl1
Sequence 12, Appl1
Sequence 12, Appl
Sequence 671, App
Sequence 671, App
Sequence 671, App
Sequence 679, App
Sequence 224, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
Sequence 7, Appl1
                                                                                                                                      December 20, 2002, 15:16:49; Search time 1.04348 Seconds (without alignments) 530.147 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/1/pubpaa/USOB_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOG_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOB_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOB_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOB_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/USOB_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEWEOWB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_PUBCOWB.pep:*
                 GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0 US-09-925-297-529

0 US-09-888-615-96

0 US-09-925-297-643

0 US-09-925-297-643

0 US-09-918-20-20

0 US-09-915-247-13730

0 US-09-915-247-13730

0 US-09-92-647-12

2 US-10-036-371-5

US-09-906-670-118

0 US-09-764-883-671

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-764-883-677-10

0 US-09-783-677-10

0 US-09-783-678-7
                                                                                                                                                                                                                                                                      1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR
                                                                                                                                                                                                                                                                                                                                                                                                                      Potal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                106657 seqs, 16763532 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Published_Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

                                                                                                                                                                                                                 US-09-856-319B-4_COPY_1_33
166
                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47.5
47.5
47.5
                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                     OM protein
                                                                                                                                                                                                                                                                           Seguence:
                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                             Run on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Result
```

Gaps

```
Sequence 2, Application US/10095449 Patent No. US20020160004A1 GENERAL INFORMATION:
                                                                                                                                                                                                    APPLICANT: Lyman, Stewart D.
16 LVGAAFGCGVPAIHPVLS 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
US-09-448-378-2
                                                                                                  US-10-095-449-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-095-449-2
                                                                        RESULT 4
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                   ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 643, Application US/09925297

Patent No. US20020081659A1

GENERAL INVENANTION:

APPLICANT: ROSen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies

FILE REFREENCE: PA.05

CURRENT APPLICATION NUMBER: US/09/925,297

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PO.03-09

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 928

SEQ ID NO 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 67; DB 10; Length 146; Pred. No. 0.053; 4; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                             Query Match 41.0%; Score 68; DB 10; Length 263; Best Local Similarity 51.7%; Pred. No. 0.073; Matches 15; Conservative 4; Mismatches 10; Indels
               FILE REFERENCE: 038602/1214
CURRENT APPLICATION NUMBER: US/09/888,615
CURRENT FILING DATE: 2001-06-26
PRIOR APPLICATION NUMBER: 60/214,047
PRIOR FILING DATE: 2000-06-26
NUMBER OS SEQ ID NOS: 150
SOFTWARE: PATENTIN VET: 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: NOVEL PROTEASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 40.4%;
Best Local Similarity 66.7%;
Matches 12; Conservative
                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-888-615-96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (126)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (143)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: SITE
LOCATION: (2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-925-297-643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-925-297-643
                                                                                                                                                                                            SEQ ID NO 96
LENGTH: 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                   ADDRESSEE: Stephen L. Malaska, Immunex Corporation
STREET: 51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 231;
Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09448378
Patent No. US20020034517A1
GENERAL INFORMATION:
APPLICANT: Brasel, Kenneth
TITLE OF INVENTION: Dendritic Cell Stimulatory Factor
FILE REFERENCE: 2836-D
                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Microsoft Word, Version #5.1
CURRENT APPLICATION DATA:
APPLICATION UNBER: US/10/095,449
FILING DATE: 13-Mar-2002
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.1%; Score 55; DB 9;
61.1%; Pred. No. 3.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/669,692
FILING DATE: 24-UNN-1996
APPLICATION NUMBER: US/08/162,407
FILING DATE: December 3, 1993
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
APPLICATION NUMBER: 08/106,463
APPLICATION NUMBER: 08/106,463
                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 32,655
REFERENCE/DOCKET NUMBER: 2813-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (206) 587-0430
TELEFAX: (206) 233-0644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Malaska, Stephen L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 231 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: May 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :||| | |:|||| ::||
192 LLLLLPLTLVLLAAAWG 209
                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                               STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 61.1
Matches 11; Conservative
                                                                                                                                                        CITY: Seattle
                                                                                                                                                                                                      COUNTRY: US
                                                                                                                                                                                                                               ZIP: 98101
```

Gaps

ó

LLGSSWGCGVPAITPALS 29

12

ò

```
Gaps
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Xu, Hong
APPLICANT: Xu, Hong
APPLICANT: Cohan, Victoria L.
APPLICANT: Cohan, Victoria L.
APPLICANT: Cohan, Victoria L.
APPLICANT: Stuart, Suash G.
TITLE OF INVENTION: HUMAN EMRI-LIKE G PROTEIN-COUPLED RECEPTOR
FILE REFERENCE: PC-0052 CIP
CURRENT APPLICATION NUMBER: US/09/992,647
CURRENT FILING DATE: 2002-11-13
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PERL PROGRAM
SEQ ID NO 12
LENGTH: 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 55; DB 10; Length 242;
Pred. No. 3.3;
3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Identification of Essential Genes In TITLE OF INVENTION: Identification of Essential Genes In TITLE OF INVENTION: Identification of Essential Genes In TITLE OF INVENTION: Prokaryotes
FILER REFERENCE: ELITRA.011A
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001.03.21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000.05.23
PRIOR FILING DATE: 2000.05.26
PRIOR FILING DATE: 2000.05.26
PRIOR FILING DATE: 2000.10.23
PRIOR FILING DATE: 2000.11.27
PRIOR FILING DATE: 2000.11.27
PRIOR FILING DATE: 2000.11.27
PRIOR FILING DATE: 2000.11.27
PRIOR FILING DATE: 2000.12.22
PRIOR FILING DATE: 2000.12.22
PRIOR FILING DATE: 2000.12.22
PRIOR FILING DATE: 2001.02.16
PRIOR FILING DATE: 2001.02.16
                          Indels
    Pred. No. 3.1;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 13730
                                                                                                                                                                                                                                 Sequence 13730, Application US/09815242
Patent No. US20020061569A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12, Application US/09992647
Patent No. US20020146767A1
GENERAL INFORMATION:
  Best Local Similarity 61.1%; Promatches 11; Conservative 4;
                                                                                                                                                                                                                                                                                                                       APPLICANT: Ohlsen, Karl L.
APPLICANT: Zyskind, Judith W.
APPLICANT: Wall, Daniel
APPLICANT: Trawick, John D.
APPLICANT: Carr, Grant J.
APPLICANT: Yamamoto, Robert T.
APPLICANT: Xu, H. Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33.1%;
58.8%;
                                                                                               :||| | |:||| ::||
192 LLLLLPLTLVLLAAAWG 209
                                                                     1 MLLLSLTLSLVLLGSSWG 18 :||| | | | | | | | | | | | |
                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Haselbeck, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 14110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Salmonella typhi
US-09-815-242-13730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 58.8
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17 WGCGVPAITPALSYNOR 33
                                                                                                                                                                                                              US-09-815-242-13730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-992-647-12
                                                                       ò
                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Stephen L. Malaska, Immunex Corporation
STREET: 51 University Street
CITY: Seattle
COUNTY: Mashington
                                                                                                                                                                                                                                 Length 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 231;
                                                                                                                                                                                                                                                                               3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Lyman, Stewart D.

**PAPLICANT: Lyman, M. Patricia
**Particia Beckmann, M. Patricia
**TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
**CORRESPONDENCE ADDRESS:
**CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
SOFTWARE: Microsoft Word, Version #5.1
CURRENT APPLICATION NUMBER: US/09/983,806
FILING DATE: 25-Oct-2001
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.1%; Score 55; DB 10;
                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/444,626
FILING DATE: 19-MAY-1995
APPLICATION NUMBER: US 08/162,407
FILING DATE: 03-DEC-1993
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
APPLICATION NUMBER: 08/068,394
                                                                                                                                                                                                                               Score 55; DB :
Pred. No. 3.1;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 2813-C TELECOMMUNICATION INFORMATION:
CURRENT APPLICATION NUMBER: US/09/448,378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear; MOLECULE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 2: US-09-983-806-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (206) 587-0430
TELEFAX: (206) 233-0644
TELEX: 756822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: May 24, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/09983806
Patent No. US20020107365A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 231 amino acids
                                                                     PatentIn version 3.0
                     1999-11-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                 33.1%;
61.1%;
                                                                                                                                                                                                                                                                                                                                                  192 LELLEPETEVELAAAWG 209
                                                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                               Query Match
Best Local Similarity 61.1
Matches 11; Conservative
                   CURRENT FILING DATE: 1
'NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin ve.
SEQ ID NO 2
LENGTH: 231
                                                                                                                                   ; TYPE: PRT
; ORGANISM: Mus sp.
US-09-448-378-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                us-09-983-806-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
US-09-764-898-219
            RESULT 11
US-09-764-853-671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-992-647-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                       NS-10-036-371-5

Sequence 5, Application US/10036371

Patent No. US20020141987A1

Patent No. US20020141987A1

TITLE OF INVENTION: FISH SERINB PROTEINASES AND THEIR PHARMACEUTICAL AND

TITLE OF INVENTION: COSMETIC USE

FILE REFERENCE: 81691/284960

CURRENT APPLICATION NUMBER: US/10/036,371

CURRENT PILING DATE: 1099-10-17

PRIOR FILING DATE: 1999-10-12

PRIOR FILING DATE: 1999-10-12

PRIOR FILING DATE: 1999-0-18

NUMBER OF SEQ ID NOS: 8

SOFTWARE: Patentin Ver: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
           PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Genbank ID No. US20020146767A1 92935597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 118, Application US/09860670

Patent No. US20020165137A1

GENERAL INPORMATION:
APPLICANT: Ruben et al.
FILE PEFERENCE: PA127P1

CURRENT APPLICATION NUMBER: US/09/860,670

CURRENT APPLICATION NUMBER: US/09/860,670

CURRENT APPLICATION NUMBER: US/09/860,670

FILO APPLICATION NUMBER: US/09/860,670

SPIJOT APPLICATION OF 1899

NUMBER OF SEQ ID NOS: 289

SOFTWARE: PATENTIN Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 48; DB 9; Length 331;
Pred. No. 37;
4; Mismatches 13; Indels
                                                                           DB 10; Length 344;
21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 48; DB 12; Length 13;
Pred. No. 1.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2; Indels
                                                                                                                       13; Indels
                                                                                                                     4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                  Score 50;
Pred. No.
                                                                                                                                                                                250 MLAFKATAQLFILGCTWCLGILQVGPA 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 | | :|| :|| :|| 228 MLAFKATAQLFILGCTWCLGLLQVGPA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28.9%;
37.0%;
                                                                                  30.1%;
37.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28.9%;
81.8%;
                                                                                    Query Match
Best Local Similarity 37.09
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 28.9
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens US-09-860-670-118
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 CGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Bovine sp
US-10-036-371-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
US-09-860-670-118
                                    ; DATABASE ACCI
US-09-992-647-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 5
LENGTH: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                           ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Xu, Hong
APPLICANT: Xu, Hong
APPLICANT: Count, Victoria L.
APPLICANT: Stuart, Susan G.
TITLE OF INVENTION: HUMAN EMRI-LIKE G PROTEIN-COUPLED RECEPTOR
FILE REFRENCE: PC-0052 CIP
CURRENT APPLICATION NUMBER: US/09/992,647
CURRENT FILING DATE: 2002-11-13
SOFTWARE: PERL Program
SEQ ID NO 1
                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 939
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 671
LENGTH: 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/764,898
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 311
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 219
LENGTH: 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 331;
                                                                                                                                                                                                                                                                                                                                                                                            Length 331;
Sequence 671, Application US/09764853
Patent No. US20020090672A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVERTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PJZ06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 219, Application US/09764898
Patent No. US20020090673A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PJZ01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
37;
                                                                                                                                                                                                                                                                                                                                                                                            Score 48; DB 10;
Pred. No. 37;
4; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 28.9%; Score 48; DB Best Local Similarity 37.0%; Pred. No. 37; Matches 10; Conservative 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 228 MLAFKATAQLFILGCTWCLGLLQVGPA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 228 MLAFKATAQLFILGCTWCLGLLQVGPA 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09992647 Patent No. US20020146767A1
                                                                                                                                                                                                                                                                                                                                                                                                 28.9%;
ilarity 37.0%;
Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-09-764-898-219
                                                                                                                                                                                                                                                                                                        TYPE: PRT
GOGANISM: Homo sapiens
US-09-764-853-671
                                                                                                                                                                                                                                                                                                                                                                                                                 Best_Local Similarity
Matches 10; Conserv
```

Search completed: December 20, 2002, 15:21:07 Job time: 1.04348 secs

```
ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 224, Application US/09764898
Fatent No. US2002009673A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: NUMBER: US/09/764,898
CURRENT APPLICANTE: D201
FILE REFERENCE: P2201
CURRENT APPLICATION NUMBER: US/09/764,898
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 224
LENGTH: 661
                                                                                                                                                                                                                                                                                                                                                                                          Sequence 679, Application US/09764853
Fatent No. US20020090672A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INFORMION:
FILE REFERENCE: PJZ06
CURRENT FILION NUMBER: US/09/764,853
CURRENT FILION DAME: 2001-01-17
Prior application data removed - consult PALM or file wrapper SOFTWARE: Patentin Ver. 2.0
SOFTWARE: Patentin Ver. 2.0
LENGTH: 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;;
                                                                                                                                                                   Query Match 28.9%; Score 48; DB 10; Length 652; Best Local Similarity 37.0%; Pred. No. 75; Matches 10; Conservative 4; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 28.9%; Score 48; DB 10; Length 661;
Best Local Similarity 37.0%; Pred. No. 76;
Matches .10; Conservative 4; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 28.9%; Score 48; DB 10; Length 661; Best Local Similarity 37.0%; Pred. No. 76; Matches 10; Conservative 4; Mismatches 13; Indels
                                                                                ; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. US20020146767A1 429905
US-09-992-647-1
                                                                                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
LENGTH: 652
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
CORGANISM: Homo sapiens
US-09-764-853-679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
CORGANISM: Homo sapiens
US-09-764-898-224
                                                                                                                                                                                                                                                                                                                                                       RESULT 14
US-09-764-853-679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
US-09-764-898-224
                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
```

g

: }

US-08-943-087-2 US-08-943-087-16 US-08-943-087-16 US-08-943-087-20 US-08-943-087-20 US-08-943-087-22 US-08-943-087-22 US-08-943-087-26 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-36 US-08-943-087-40

Sequence /

Sequence

ALIGNMENTS

Sequence

Sequence

Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sednence Sed

```
Best_Local Similarity 48.3
Matches 14; Conservative
RESULT 2
US-08-220-379B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                      US-09-052-778-14
 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH
 QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Appl
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Appl Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 14, Appl
                                                                                                                               (without alignments)
519.349 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                             December 20, 2002, 15:14:53; Search time 1.86957 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sednence sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2_6/ptodata/1/1aa/5A_COMB.pep:*
/cgn2_6/ptodata/1/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/1/1aa/6A_COMB.pep:*
/cgn2_6/ptodata/1/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/1/1aa/pcvrUS_COMB.pep:*
/cgn2_6/ptodata/1/1aa/pcvrUS_COMB.pep:*
             GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                               1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNOR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-243-545-2

US-08-993-962-2

US-09-160-841-2

PCT-US95-03866-6

US-09-186-6-6

US-09-199-793-2

US-09-199-793-2

US-09-199-793-2

US-09-199-793-2

US-09-199-793-2

US-09-10-116-1

US-09-296-284-6

US-09-296-284-6

US-09-296-284-6

US-09-10-116-1

US-08-956-322-1

US-08-96-344-19

US-08-96-944-19

US-08-96-94-19

US-08-96-94-19

US-08-134-010-189-2

US-09-10-089-2

US-09-134-011C-4456

US-09-134-001C-4456

US-09-134-001C-3180

US-08-134-001C-3180

US-08-134-001C-3180

US-08-855-518-5
                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                   262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum Match 100%
Listing first 45 summaries
                                                                              - protein search, using sw model
                                                                                                                                                                                US-09-856-319B-4_COPY_1_33
                                                                                                                                                                                                                                                                Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0 $\rm Maximum\ DB\ seq\ length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1620
1620
1620
                                                                                                                                                                                                                                                BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.5
48.5
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46.5
46.5
46
46
                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                 Perfect score:
                                                                                OM protein
                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š.
```

```
1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
Sequence 14, Application US/09052778A

Patent No. 6060590

GENERAL INFORMATION:
APPLICANT: Bryant, Peter J.
APPLICANT: Bryant, Razuo
TITLE OF INVENTION: CHITINASE RELATED PROTEINS AND METHODS
TITLE OF INVENTION: CHITINASE RELATED PROTEINS AND METHODS
FILE REFERENCE: 07306/015001
CURRENT APPLICATION NUMBER: US/09/052,778A
CURRENT FILING DATE: 1998-03-31
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KIT LIGAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7, Application US/08220379B
Patent No. 5525708
GENERAL INFORMATION:
APPLICANT: No. 5525708ka, Karl
APPLICANT: LObell, Robert B
TITLE OF INVENTION: STABILIZED DIMER OF KIT
COMMER OF SEQUENCES: 7
COMMER OF SEQUENCES: 7
COMMERSSEE: Fish & Neave
STREET: 1251 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 55.5; D
Pred. No. 8.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210 LLLSLTV-LPNVNSSWYYDAPSLAF 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 LLLSLTLSLVLLGSSWGCGVPAITPALSY 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: New York
STATE: New York
COUNTRY: United States of America
ZIP: 10020
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                United States of America
                                                                                                                                                                                                                                                                                                                             TYPE: PRT
; ORGANISM: Drosophila melanogaster
US-09-052-778-14
                                                                                                                                                                                                                                                                                                                                                                                                                           33.4%;
48.3%;
```

```
Score 55; DB 1; Length 231;
Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Lyman, Stewart D.
APPLICANT: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: Stephen L. Malaska, Immunex Corporation
STREET: 51 University Street
CITY: Seattle
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTE: US

COMPUTER READABLE FORM:
MEDUND TYPE: RIOPY disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh
OPERATING SYSTEM: Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
SOFWARE: Microsoft Word, Version #5.1
CURBENT APPLICATION DATA:
APPLICATION NUMBER: US/08/993,962
FILING DATE: December 18, 1997
CLASSIFICATION NUMBER: US/08/162,407
FILING DATE: December 3, 1993
APPLICATION NUMBER: US/08/163,407
FILING DATE: August 25, 1993
CLASSIFICATION NUMBER: 08/11,758
FILING DATE: August 12, 1993
CLASSIFICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
CLASSIFICATION NUMBER: Q8/068,394
FILING DATE: August 12, 1993
CLASSIFICATION NUMBER: US/068,394
FILING DATE: May 24, 1993
CLASSIFICATION NUMBER: US/068,394
FILING DATE: MAY 24, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4; Mismatches
PRIOR APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE: May 24, 1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
RECISTRATION NUMBER: 32,655
REFERENCE/DOCKET NUMBER: 2813-C
TELECOMNUCATION INFORMATION:
TELEPHONE: (206) 283-0644
TELEFAX: (206) 283-0644
TELEFAX: 75682
INFORMATION FOR SED ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 231 amino acids
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-243-545-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/08993962
Patent No. 5843423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
REFERNCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 33.1%;
Best Local Similarity 61.1%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 LILLIPLTIVILAAAWG 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
US-08-993-962-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 55; DB 1; Length 231;
Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAGES: 1157-1167

DATE: 1993

RELEVANT RESIDUES IN SEQ ID NO: 7: FROM 1 TO 231
US-08-220-379B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Mismatches
                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/220,379B
FILING DATE: 28-MAR-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Haley 17, James F
REGISTRATION NUMBER: 27,794
REFERENCE/DOCKET NUMBER: CytoMed/2
TELECOMMUNICATION INFORMATION:
TELEFONE: 212-596-9000
TELEFAX: 212-596-9000
TELEFAX: 212-596-9000
TELEFAX: 212-596-9000
TELEFAX: 213-596-9000
TELEFAX: 213-331 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: mino acids
T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANTI-SENSE: NO FRAGMENT TYPE: N-terminal PUBLICATION INFORMATION: AUTHORS: Lyman, et al. JOURNAL: Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 61.1
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
```

Indels

```
Pred. No. 4.7;
          Best Local Similarity 61.1%; Promatches 11; Conservative 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (206) 233-0644
TELEX: 756822
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (206) 587-0430
(206) 233-0644
                                                                                         :||| | |:|||| ::||
192 LLLLLPLTLVLLAAAWG 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 231 amino acids TYPE: amino acid
                                                                 1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , MOLECULE TYPE: protein PCT-US94-05365-2
                                                                                                                                                                                                                                                                                                                                                             STREET: 51 Univers
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: AN CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: DO CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         98101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                      PCT-US94-05365-2
                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                   á
                                                                                                        g
                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                               3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Lyman, Stewart D.
APPLICANT: Lyman, M. Patricia
TITLE OF INVENTION: Ligands for fl13/flk-2 Receptors
NUMBER OF SEQUENCES: 8
ADDRESSEE: Stephen L. Malaska, Immunex Corporation
STREET: 51 University Street
                                                                                                                                                                                                                        Score 55; DB 2;
Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 98101
COMPUTER REARABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
SOFTWARE: Microsoft Word, Version #5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/160,841
                                                                                                                                                                                                                                                               4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.1%; Score 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFCATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/162,407
FILING DATE: December 3, 1993
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
RIOR APPLICATION NUMBER: 08/068,394
FILING DATE: MAY 24, 1993
APPLICATION NUMBER: 08/068,394
FILING DATE: MAY 24, 1993
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/162,407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2813-C
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/09160841
Patent No. 6190655
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
REFRENCE/DOCKET NUMBER: 2813
TELECOMMULCATION INFORMATION:
TELEPHONE: (206) 587-0430
TELEFAX: (206) 233-0644
TELEPHONE: (206) 587-0430
TELEFAX: (206) 233-0644
TELEX: 756822
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
TENGTH: 231 amino acids
TYPE: amino acid
TYPE: amino acid
MOLECULE TYPE: protein
US-08-993-962-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 756822
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 231 amino acids TYPE: amino acid
                                                                                                                                                                                                                      Query Match 33.1%;
Best Local Similarity 61.1%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                          :||| | |:|||| ::||
192 LLLLLPLTLVLLAAAWG 209
                                                                                                                                                                                                                                                                                                  1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 51 Univers
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
US-09-160-841-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                         g
```

```
Length 231;
Sequence 2, Application PC/TUS9405365
GENERAL INFORMATION:
APPLICANT: Lyman, Stewart D.
APPLICANT: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                ADDRESSEE: Stephen L. Malaska, Immunex Corporation STREET: 51 University Street
                                                                                                                                                                                                                                                                                                                        COMPUTER FRADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COPERATING SYSTEM: PC-DCS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/05365
FILING DATE: May 24, 1994
CLASIFFICATION:
PRIOR APPLICATION:
APPLICATION NUMBER: -to be assigned-
FILING DATE: May 11, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33.1%; Score 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/209,502
FILING DATE: March 7, 1994
CLASSIFICATION
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/162,407
FILING DATE: December 3, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 08/068,394
FILING DATE: May 24, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
```

```
DB 1; Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PAtentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/765,192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 5.5
5; Mismatches
                               ADDRESSEE: CARELLA, BYRNE, BAIN, GILFI ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD CITY: ROSELAND STATE: NEW JERSEY COUWTRY: USA ZIP: 07068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
US-08-765-192-2
Sequence 2, Application US/08765192
Fatent No. 5651814
GENERAL INFORMATION:
APPLICANT: Greene, John et al.
TITLE OF INVENTION: Human Blastase IV
NUMBER OF SEQUENCES: 4
CORRESSONDENCE ADDRESS:
ADDRESSED: Human Genome Sciences, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
CITY: Rockville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 55; I
Pred. No. 5.
                                                                                                                                                                                                                                 OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/270,584A
FILING DATE: July 5, 1994
CLASSIERTOWNEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER REALABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,134
REFRENCE/DOCKET NUMBER: 325;
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
TELEPHONE: 201-994-1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36,134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 33.1%;
Best Local Similarity 40.7%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 268 AMINO ACIDS
AMINO ACID
                                                                                                                                                                                                                                                                                                                         FILING DATE: July 5,
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: LINEAR; MOLECULE TYPE: PROTEIN US-08-270-584A-2
                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
CLASSIFICATION: 435
  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Rockvi
STATE: MD
COUNTRY: US
ZIP: 20850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                         Gaps
                       ;;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                               Sequence 6, Application PC/TUS9503866
GENERAL INFORMATION:
APPLICANT: CytoMed, Inc. (all states except US)
APPLICANT: CytoMed, Inc. (all states except US)
APPLICANT: Lobell, Robert B (US only)
TITLE OF INVENTION: STABILIZED DIMER OF KIT LIGAND
TITLE OF INVENTION: ELT-3/FLK-2 LIGAND
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Neave
STREET: 1251 Avenue of the Americas
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5; Length 231;
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/03866
                       3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 55; DB 9 Pred. No. 4.7; 4; Mismatches
  Pred. No. 4.7;
                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/220,379
FILING DATE: 28-MAR-1994
ATTONREY AGENT INFORMATION:
NAME: Haley Jr, James F
REGISTRATION NUMBER: 27,794
REFERENCE/DOCKET NUMBER: CytoMed/2
TELECOMMUNICATION INFORMATION:
TELEFRA: 212-596-9000
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ET AL.
Human Elastase IV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08270584A Patent No. 5710035 GENERAL INFORMATION: ET AL. TITLE OF INVENTION: Human Elastas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: not relevant
Best Local Similarity 61.1%;
Matches 11; Conservative ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33.1%;
61.1%;
                                                                                    192 LLLLLLPLTLVLLAAAWG 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :||| | |:|||| ::||
192 LLLLLPLTLVLLAAAWG 209
                                                          1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 33.1
Best Local Similarity 61.1
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : protein
NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Protein LOCATION: 1..205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: Ur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
PCT-US95-03866-6
                                                                                                                                                               RESULT 7
PCT-US95-03866-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-270-584A-2
                                                               ó
```

Gaps

PF125US

REFERENCE/DOCKET NUMBER:

```
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Fusion gene of
OTHER INFORMATION: human protease F in CFEK2 zymogen vector
US-09-386-642-53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: Fusion gene COTHER INFORMATION: with homo sapien serine protease catalytic domain US-09-386-642-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 52; DB 4; Length 306;
Pred. No. 16;
3; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 319,
                                                                                                                APPLICANT: Darrow, Andrew
APPLICANT: Olivenson
APPLICANT: Adrade-Gordon, Patricia
TITLE OF INVENTION: Zymogen Activation System
FILE REFERENCE: ORT-1028
CURREWT APPLICATION NUMBER: US/09/386,642
CURREWT FILING DATE: 1999-08-31
NUMBER OF SEQ ID NOS: 60
SOFTWARE: Patentin Ver. 2.0
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31.3%; Score 52; DB 4; 50.0%; Pred. No. 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Darrow, Andrew
APPLICANT: Q1, Jenson
APPLICANT: Andrade-Gordon, Patricia
TITLE OF INVENTION: 2ymogen Activation System
FILE REFERENCE: ORT-1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/386,642 CURRENT FILING DATE: 1999-08-31 NUMBER OF SEQ ID NOS: 60 SOFTWARE: PATENTIN VET. 2.0
                  RESULT 11
US-09-186-642-53
Sequence 53, Application US/09386642
Patent No. 6420157
GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-386-642-12; Sequence 12, Application US/09386642; Patent No. 6420157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/09110116 Patent No. 6013479 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MLLLSLTLSLVLLGSSWGCGVP 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MLLLSLTLSLVLLGSSWGCGVP 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MAFLWLLSCWALLGTTFGCGVP 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MAFLWLLSCWALLGTTFGCGVP 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 31.3%;
Best Local Similarity 50.0%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Xu, Hong
APPLICANT: Cohan, Victoria L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-09-110-116-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 319
                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 55; DB 3; Length 268;
Pred. No. 5.5;
5; Mismatches 11; Indels
                                                                                                                                                                                                                                          DB 2; Length 268;
                                                                                                                                                                                                                                                                               5; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/199,793
FILING DATE:
                                                                                                                                                                                                                                        ch 33.1%; Score 55; DB 31.1%; Score 55; DB 31.1%; Pred. No. 5.5; 11; Conservative 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Human Genome Sciences, Inc. STREET: 9410 Key West Avenue CITY: Rockville STATE: MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Greene, John et al.
TITLE OF INVENTION: Human Elastase IV
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                         3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                              1 HIGITVLAALLACASSCGVPSFPPNLS 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF125US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLGITVLAALLACASSCGVPSFPPNLS 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/765,192
FILLING DATE: Apr-24-97
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/09199793
Patent No. 6107075
                             INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 268 annino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Brookes, A. Anders
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION
TELEPHONE: 301-309-8504
TELECOMMUNICATION INFORMATION:
TELEPHONE: 3013098504
TELEFAX: 3013098439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         i: 268 amino acids amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301-309-8439
                                                                                                                                           single
                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 11; Conserva
                                                                                                                                                                                                                                                             Best Local Similarity
Matches 11; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RY: US
20850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-199-793-2
                                                                                                                                                                                                   US-08-765-192-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-199-793-2
                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
```

ö

```
ò
                                                                                                                                                                                                                 ΩD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 6, Application US/09296284A

Sequence 6, Application US/09296284A

Patent No. 6204040

GENERAL INFORMATION:
APPLICANT: Choi, Eui-Sung

APPLICANT: Rhee, Sang-Ki

APPLICANT: Lee, Eun-Hae

TITLE OF INVENTION: Glucenobacter Suboxydans Sorbitol Dehydrogenase, Genes

TITLE OF INVENTION: and Methods of Use Thereof

TITLE OF INVENTION: Glucenobacter Suboxydans Sorbitol Dehydrogenase, Genes

TITLE OF INVENTION: 401 Methods of Use Thereof

TITLE OF INVENTION: 1999-04-22

CURRENT APPLICATION NUMBER: US/09/296,284A

SOFFWARE: Patentin Ver. 2.0

SEQ ID NO 6

LENGTH: 306
                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Choi, Eui-Sung
APPLICANT: Rhee, Sang-Ki
APPLICANT: Rhee, Sang-Ki
APPLICANT: Lee, Eun-Hae
TITLE OF INVENTION: Gluconobacter Suboxydans Sorbitol Dehydrogenase, Genes
TITLE OF INVENTION: and Methods of Use Thereof
FILE REFERENCE: 1533.0870000
CURRENT APPLICATION NUMBER: US/09/296,284A
CURRENT FILING DATE: 1999-04-22
NUMBER OF SEO ID NOS: 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 280;)
                                                                                                                                                                                                                                                                                                                                                                                     Score 50; DB 3; Length 344;
Pred. No. 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           4; Mismatches 13; Indels
               TITLE OF INVENTION: HUMAN EMRI-LIKE G PROTEIN COUPLED TITLE OF INVENTION: RECEPTOR FILE REFERENCE: PF-0550 US CURRENT APPLICATION NUMBER: US/09/110,116 CURRENT FILING DATE: 1998-07-02 NUMBER OF SEQ ID NOS: 4 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 4 LENGTH: 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 48.5; DE
Pred. No. 44;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       250 MLAFKATAQLFILGCTWCLGILQVGPA 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MLLLSLTLSLVLLGSSWGCGVPAITPA 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 27, Application US/09296284A Patent No. 6204040 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                  CRGANISM: HOMO SAPIENS
FEATURE:
COTHER INFORMATION: 2935597, Genbank
US-09-110-116-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT; ORGANISM: Gluconobacter suboxydans US-09-296-284-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243 IRLALALALARKWGAGVPKVLP 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 LTLSLVL-LGSSWGCGVPAITP 26
                                                                                                                                                                                                                                                                                                                                                                                       Query Match 30.1%;
Best Local Similarity 37.0%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 29.2%;
Best Local Similarity 45.5%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patentin Ver. 2.0
APPLICANT: Stuart, Susan G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-296-284-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 27
LENGTH: 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-296-284-6
                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
. 1;
                                                                     Gaps
                                                                     1;
                                        Score 48.5; DB 4; Length 306; Pred. No. 48;
                                                                     Indels
                                                                    .;
;
                                                                    3; Mismatches
                                                                                                                                                                    Search completed: December 20, 2002, 15:20:38 Job time: 2.86957 secs
; ORGANISM: Gluconobacter suboxydans US-09-296-284-6
                                                                                                                   6 LTLSLVL-LGSSWGCGVPAITP 26
                                         29.2%;
                                         Query Match
Best Local Similarity 45.5
Matches 10; Conservative
```

```
December 20, 2002, 15:12:13 ; Search time 5.08696 Seconds (without alignments) 864.421 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                             908470
GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                          166
1 MLLLSLYLLGSSWGCGVPAÍTPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                    908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                         US-09-856-319B-4_COPY_1_33
                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Databas
```

8	2: /SIDSZ/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:* 3: /SIDSZ/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*	4: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:	gcgdata/geneseq/geneseqp-embl/AA1984.	6: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:	/: /sibs/gcgdata/geneseq/geneseqp-embi/AA198b.DAT: 8: /SIDS2/qcqdata/qeneseq/qeneseqp-embl/AA1987.DAT:	9: /SIDS2/gcgdata/geneseq/genesegp-embl/AA1988.DAT:	10: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1989.DAT	 12: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:	13: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:	14: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:	15: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1994.DAT:	<pre>16: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT:</pre>	17: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1996.DAT:	 	20: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:	` 	22: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT;	23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT
e e																		

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

			•
S			
딡			
₹			
SUMMARIES			
ß			
			í
			6
			٤
			1
			٠
		ry	1
	æ	ë	4
		a	2
		Query	•
			1
			ć

					Contraction		
Result No.	Score	% Query Match	% Query Match Length DB	08	ID	Description	
1	166	100.0		21	:	Mouse serine pro	, qu
7	150	90.4		21	.AAB11710	Human serine pro	ø
Ю	133	80.1	192	21	AAB54077	Human pancreatic c	· U
4	68	41.0		21	AAY64742	Human 5' EST rela	ī
'n	68	41.0		23	AAU82738	Amino acid seque	ວ
9	67	40.4		21	AAB54191	Human pancreatic	υ
7	59	35.5		50	AAY11649	Human 5' EST sec	e)
80	58	34.9		23	AAU95588	Human olfactory	=
6	28	34.9		22	AAG71664	Human olfactory	e)
10	28	34.9		22	AAG72192	Human olfactory re	e)

11121212121212121212121212121212121212		4.00000000000000	312 4411 1233 1233 2331 242 242 268	22 22 22 22 22 22 22 22 22 23	AAG72355 AAB607181 AAB60694 AAX11650 AAX67540 AAX0186 AAR20189 AAB20189 AAR38137 AAR90683	OR-like phila melophila melophila melophila melophila melophila strata like fitt-3 like morilo/T
3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	20 20 20 20 20 20 20 20 20 20		268 13 84 760 55 222 306 319	1202222	AAR88481 AAY50212 AAB65394 AAB67538 AAB67539 AAY3759 AAR37759 AAB67544	Human elastase IV Neutrophil-activat Novel human secret Human prostate ECG Amino acid sequenc Amino acid sequenc Amino acid sequenc Amino acid sequenc Amino acid sequenc Amino acid sequenc
	52 52 50 50 50 50 50 50 50 50 50 50 50 50 50	31.3 30.7 30.7 30.7 30.7 30.1 30.1 30.1 30.1 30.1 30.1	319 320 320 320 320 144 162 222 223 800 823 35	22 22 23 23 23 23 23 23 23 23 23	AAB67541 AAY7332 AAB90142 ABB90142 AAB91390 AAB91392 AAB41952 AAB67458 AAY73942 AAY73942 AAY73942 AAY3943 AAY3943 AAY3943 AAY3943 AAY307 AAE13609 AAE13609	Anino acid sequenc Human secreted pro Human polypeptide Human protein sequ Herbicidally activ Human ORFX ORF1716 Drosophila melanog Human prostate tum Rat camello 1 (Rcm Human cell surface Novel human diagno Human mature EGF-1 Human mature EGF-1 Human specific
RESULT 1 AAB11711	1211 0+		Drot of a		ALIGNMENTS	

## Mouse serine protease BSSP5 (mBSSP5) SEQ ID NO:4. Š AAB11711 standard; Protein; 264 23-OCT-2000 (first entry) AAB11711;

BSSP5; serine protease; human; hBSSP5; mouse; mBSSP5; brain; diagnostic marker; antibody; transgenic animal; Alzheimer's disease; epilepsy; cancer; inflammation; infertility; pancreatitis; prostatic hypertrophy.

Mitsui Uemura H, Okui A, Kominami K, Yamaguchi N, 99WO-JP06473 98JP-0347806 (FUSO ) FUSO PHARM IND LTD. WO200031243-A1. 20-NOV-1998; 19-NOV-1999; 02-JUN-2000. Mus sp. 

Serine proteases BSSP5, useful in detecting homologs, mutants and WPI; 2000-400058/34. N-PSDB; AAA61734.

ŝ

```
The invention relates to novel serine proteases designated BSSP5

(AAB11710-B11711), and to nucleic acids encoding them (AAA61733-A61734).

The invention also relates to vectors and transformants comprising BSSP5 nucleic acids, transgenic animals in which the expression level of BSSP5 nucleic acids, transgenic animals in which the expression level of BSSP5 can be varied; and an mBSSP5 knockout mouse. The invention additionally encompasses anti-BSSP5 antibodies and methods of production of such antibodies, methods of BSSP5 detection using the antibodies, and the use of BSSP5 proteins or fragments as diagnostic markers for certain medical conditions, e.g., pancreatitis. A method for detecting pancreatitis comprising measuring BSSP5 concentration in the blood or urine, and a pancreatitis diagnostic agent containing an anti-BSSP5 antibody is also disclosed. Nucleotides encoding BSSP5 were initially isolated in a human brain cDNA library using degenerate PCR primers (AAA61745) based on conserved regions of serine proteases. The BSSP5 serine proteases and nucleotides encoding them are useful in a BSSP5 serine proteases and nucleotides encoding than are useful in a samples (e.g., blood, urine, brain, prostate gland, placenta, testis, pancreas and spleen) as diagnostic markers for conditions such as pancreatitis and prostatic hypertrophy. Sequence AAB11710 represents murine BSSP5 (hBSSP5), and sequence AAB1711 represents murine BSSP5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BSSP5; serine protease; human; hBSSP5; mouse; mBSSP5; brain; diagnostic marker; antibody; transgenic animal; Alzheimer's disease; epilepsy; cancer: inflammation; infertility; pancreatitis; prostatic hypertrophy.
polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mitsui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human serine protease BSSP5 (hBSSP5) SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 166; DB 21 100.0%; Pred. No. 1e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yamaguchi N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                              Claim 3; Page 55-56; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB11710 standard; Protein; 264 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Uemura H, Okui A, Kominami K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98JP-0347806.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-JP06473.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FUSO ) FUSO PHARM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-400058/34.
N-PSDB; AAA61733.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200031243-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (mBSSP5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB11710;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB117.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
     ö
```

Serine proteases BSSP5, useful in detecting homologs, mutants and

ö

```
The invention relates to novel serine proteases designated BSSP5

(AAB11710-B11711), and to nucleic acids encoding them (AAA61733-A61734).

The invention also relates to vectors and transformants comprising BSSP5

nucleic acids; transgenic animals in which the expression level of BSSP5

can be varied; and an mBSSP5 knockout mouse. The invention additionally

encompasses anti-BSSP5 antibodies and methods of production of such

antibodies, methods of BSSP5 detection using the antibodies, and the

cuse of BSSP5 proteins or fragments as diagnostic markers for certain

medical conditions, e.g., pancreatitis. A method for detecting

pancreatitis comprising measuring BSSP5 concentration in the blood or

urine, and a pancreatitis diagnostic agent containing an anti-BSSP5

antibody is also disclosed. Nucleotides encoding BSSP5 were initially
isolated in a human brain cDNA library using degenerate PCR primers

(AAA61744-A61745) based on conserved regions of serine proteases. The
BSSP5 serine proteases and nucleotides encoding them are useful in
detecting homologues, mutants and polymorphic variants in biological

samples (e.g., blood, urine, brain, prostate gland, placenta, testis,
pancrear and spleen) as diagnostic markers for conditions as
conditions, and spleen) as diagnostic markers for conditions as
conditions, and spleen) as diagnostic markers for conditions.

Alzehimer's disease, epilepsy, cancer, inflammation, infertility,
humsosh,
humsosh,
humsosh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 detection; diagnosis; identification; cytostatic; neuroprofective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
polymorphic variants as markers for diagnosis of e.g. Alzheimer's disease, epilepsy, cancer and inflammation, using blood, urine, pancreas or other tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human pancreatic cancer antigen protein sequence SEQ ID NO:529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; pancreas; pancreatic cancer; pancreatic cancer antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 150; DB 21;
Pred. No. 1.3e-11;
3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MILLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLLLSLTLSLVLLGSSWGCGIPAIKPALSFSQR 33
                                                                                       Claim 1; Page 51-52; 70pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB54077 standard; Protein; 192 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90.4%;
87.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-MAR-2000; 2000WO-US05989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 90.4
Best Local Similarity 87.9
Matches 29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-579444/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200055320-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB54077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (mBSSP5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB54077
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
N-PSDB; AAZ42356
                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU82738
   á
                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                         proteins, called pancreatic cancer antigens, given in AAB54008 to
proteins, called pancreatic cancer antigens have cytostatic,
called pancreatic cancer antigens have cytostatic,
care therapy the pancreatic cancer antigens have cytostatic,
called pancreatic cancer antigens have cytostatic,
called parcreatic cancer antigens, parchities, and can be used for
called parcreatic and antilnflammatory activities, and can be used for
called parcreatic cancer and proteins can be used for
called parcreatic cancer antigens can be used to detect, treat or prevent pancreatic disorders, especially cancer.
called hybridisation probes that can be used in chromosome mapping, linkage can allysis, tissue identification and/or typing and a variety of forensic and lagonstic methods. The proteins can be used to design nucleic and lagonstic methods. The proteins can be used to generate antibodies
cand diagnostic methods. The proteins can be used to generate antibodies
which are used to purify, detect and target the polypeptides, including
companies and antivito diagnostic and therapeutic methods. The
corrections can be used to treat or prevent neural, immune system, muscular,
creproductive, gastrointestinal, pulmonary, cardiovascular, represent
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                     New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; 5' EST; expressed sequence tag; secreted protein; diagnosis; gene therapy; chromosome mapping; upstream regulatory sequence; forensic; location; development; protein synthesis; stability; regulation; identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                           sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                            Score 133; DB 21; Length 192;
Pred. No. 1.5e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human 5' EST related polypeptide SEQ ID NO:903.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Giordano J;
                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 SLTLSLVLLGSSWGCGIPAIKPALSFSQR 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                      Claim 11; Page 966; 1379pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dumas Milne Edwards J, Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY64742 standard; Protein; 44 AA.
                                                                                                                                                                                                                                                                                                                                                                                                          80.1%;
86.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-IB00712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0057719
98US-0069047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-FEB-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 80.1%
Best Local Similarity 86.2%
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-038446/03
                                                                                                                                                                                                                                                                                                                                                                                   192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09953051-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                    Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY64742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY64742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
AAY65438 represent the EST-related proteins. AAY6651 to
AAY65438 represent the EST-related proteins corresponding to AA24265 to
AAX465438 represent the EST-related proteins corresponding to AA242265 to
AAX46552. They can be used for producing secreted human gene
EST control to development stage, rate, and quantity of protein synthesis, as
regions (UTRs) and upstream regulatory regions which control the
CST control, development stage, rate, and quantity of protein synthesis, as
well as stability of mRNA. The ESTs are also useful as probes for
Chromosome mapping, and to obtain full length cDNA clones. The ESTs can
also be used in forensic procedures to identify individuals, or in
C diagnostic procedures to identify individuals having genetic diseases
resulting from abnormal gene expression. The products may also be used in
CST control of a polypeptide into a membrane, or importing a polypeptide
CST into a cell. The proteins encoded by the EST sequences may be useful in
C treating a variety of human conditions. Secreted proteins have
CST chrambele. AAA42249 to AAA42264 and AAX64644 to AAX6666 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; protease; cancer; immune-related disorder; cardiovascular disease; neuronal-associated disease; metabolic disorder; inflammatory disorder; nervous system disorder; sexual dysfunction; pain; mood disorder; hypertension; psychotic disorder; neurological disorder; dyskinesia; viral infection; human immunodeficiency virus; HIV; non-viral infection; ocular disease; cytostatic; enzyme.
                                    diagnostic, forensic, gene therapy, and chromosome mapping procedures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                               AAZ42265 to AAZ43075 represent novel 5' expressed sequence tag (EST)
secreted protein 5' expressed sequence tag sequences used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caenepeel S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41.0%; Score 68; DB 21; Length 44; 45.5%; Pred. No. 0.092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amino acid sequence of novel human protease #37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Manning G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MLLLSLTLSLVLLGSSWGCGVPAITPALSYNQR 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sudarsanam S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ź
                                                                                                 Claim 3; Page 629; 837pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU82738 standard; Protein; 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUN-2001; 2001WO-US20171.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-JUN-2000; 2000US-214047P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Whyte D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-139913/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SUGE-) SUGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; ABK31780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200200860-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Charydczak G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plowman G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU82738;
```

```
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to the isolation of novel human proteases, and the nucleic acids encoding them. The sequences of the invention are useful for treating diseases and disorders such as cancers (e.g. breast, colon, lung), immune-related diseases and disorders (e.g. inflammatory diseases and asthma), cardiovascular diseases (e.g. inflammatory diseases and coronary thrombosis), brain or neuronal-associated diseases, metabolic disorders (e.g. diabetes, obesity), inflammatory disorders (e.g. rheumatoid arthritis and psoriasis), central or peripheral nervous system diseases, migraines, pain, sexual dysfunction, mod disorders, attention disorders, ophicial disorders, hypotension, hypertension, psychotic disorders, neurological disorders, hypotension, hypertension, psychotic disorders, neurological disorders.

(e.g. Alzheimer's disease, Parkinson's disease) and dyskinesias.

The nucleic acids and polypeptides are also useful for treating viral infections caused by human immunodeficiency virus (HIV), and non-viral infections such as ocular disease (e.g. glaucoma) and macular disease of contractions caused by human issued (e.g. glaucoma) and macular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; pancreas; pancreatic cancer; pancreatic cancer antigen; detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecological; antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forensic; neural; immune system; muscular; reproductive; gastrointestinal; pulmonary; cardiovascular; renal; proliferative.
                                       treating diseases and disorders such as cancers, immune-related diseases and disorders, cardiovascular disease (e.g. restenosis) and inflammatory disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New nucleic acid that is a pancreatic cancer antigen for preventing,
                          Nucleic acids encoding novel human proteases, useful for useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human pancreatic cancer antigen protein sequence SEQ ID NO:643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41.0%; Score 68; DB 23; Length 263; 51.7%; Pred. No. 0.63; Live 4; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MLLLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB54191 standard; Protein; 146 AA.
                                                                                                                                                 Claim 6; Fig 2M; 313pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38-MAR-2000; 2000WO-US05989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0124270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4PI; 2000-579444/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        263 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAC98956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200055320-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB54191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB5419
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCOUNT OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PART OF A PAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
```

```
AMENSA'S TO AMENSA'S TO AMENONE THE NUMBER PRICE CARGE ASSOCIATION OF AMENSA'S TO AMENSA'S ALL AMENONE CARLED AMENONE CARLED AMENONE CALLED BY AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLED AMENONE CALLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            forensic; gene therapy; chromosome mapping; signal peptide; upstream regulatory sequence; cytokine activity; cell proliferation; differentiation; haematopolesis regulation; tissue growth regulation; reproductive hormone regulation; chemotactic; chemokinetic; haemostatic;
treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
                                                                                                                                                                                                                                                    to AAC99231 encode the human pancreatic cancer associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; secreted protein; EST; expressed sequence tag; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40.4%; Score 67; DB 21; Length 146; 66.7%; Pred. No. 0.45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thrombolytic; anti-inflammatory; tumour inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lacroix B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human 5' EST secreted protein SEQ ID NO:301.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                      Claim 11; Page 1081; 1379pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY11649 standard; Protein; 195 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Duclert A, Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-IB01233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-JUN-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12 LLGSSWGCGVPAITPALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-153700/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
ses 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  146 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAX40367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W09906439-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY11649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
```

```
anxiety and schizophrenia
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-290713/30.
                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                      306 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200127158-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bellenson J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                        Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAG71664;
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAG71664
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                     AMX40251 to AAX40397 represent 5' expressed sequence tags (ESTs) for human secreted proteins, and encode the proteins given in AAY11533 to AAX11679. respectively. The proteins given represent the signal peptide and an N-terminal fragment of a secreted protein. The nucleic acid sequences can be used for producing secreted human gene products. They can also be used to develop products for diagnosis and therapy. The proteins obtained may have cytokine activity, coll proliferation/differentiation activity, haematopoiesis regulating activity, issue growth regulating activity, respectively haemostatic and thrombolytic activity, receptor/ ligand activity, anti-inflammatory activity, tumour inhibition activity or other activity and includes activity and activity and activity.
                                                                                                                                                                                                                                can be used in forensic, gene therapy and chromosome mapping procedures. The sequences can also be used for obtaining corresponding promoter sequences. The nucleic acids encoding the signal peptide can be used for directing extracellular secretion of a polypeptide or the insertion of a polypeptide into a membrane, or importing a polypeptide into a cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPCR; tranquilizer; antidepressant; neuroleptic; endocrine; anabolic; anorectic; taste; fragrance; food additive; cosmetic; cell migration; sterility; psychotic disorder; neurological disorder; anxiety; schizophrenia; manic depression; depression; axonal growth; menstrual cycle; appetite sexual motivation; sexual attraction;
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel pheromone G-protein coupled receptor and receptor-derived agonists, antagonists or inhibitors useful in food or cosmetic produor in the treatment or prevention of neurological disorders such as
New nucleic acids encoding human secreted proteins - obtained from CDNA libraries derived from liver, lung, large intestine, colon,
                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human olfactory and pheromone G protein-coupled receptor #75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; olfactory and pheromone G protein coupled; receptor;
                                                                                                                                                                                                                                                                                                                                        Length 195
                                                                                                                                                                                                                                                                                                                                                                  5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                        Score 59; DB 20;
Pred. No. 6.8;
                                                  Claim 27; Page 378-379; 398pp; English.
                                                                                                                                                                                                                                                                                                                                                                                               3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                              AAU95588 standard; Protein; 306 AA
                                                                                                                                                                                                                                                                                                                                          35.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-SEP-2001; 2001WO-BE00162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-SEP-2000; 2000EP-0870211.
                          thyroid and pancreas tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 44.4<sup>1</sup>
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-330013/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHEM-) CHEMCOM SA
                                                                                                                                                                                                                                                                                                                195 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; ABK68475.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WÓ200224726-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-MAR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aggression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Veithen A;
                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU95588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU95588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
```

```
receptor (GPCR) or a protein 95% identical to the GPCR, a specific active portion and its encoding polynuclectide. Also included are an agonist, antagonist or inhibitor of the GPCR or the polynuclectide, a vector.

Comprising the polynuclectide, a cell transformed by the vector, a non-thuman mammal comprising a partial or total deletion of the polynuclectide encoding the receptor and screening (detection and possibly, recovering) of compounds which are known or not known to be agonist, antagonists or inhibitors of natural compounds to the GPCR. The receptor-derived agonists, antagonists, inhibitors or compounds are used as an improvement, elimination or substitution of an existing taste and/or a fragrance of (or in) the food and/or cosmetic products. They can also be used in the preparation of medicament in the treatment and/or prevention of a mammalian disorders, including anxiety, schizophrenia, manic depression, depression, for promoting axonal growth, nerve cell connection and nerve regeneration for modulating male and female
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; olfactory receptor; OR; primary scent determination; secondary scent determination; polypeptide library; odour receptor; scent profile; scent fingerprint; scent representation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New polynucleotides which encode polypeptides involved in olfactory sensation for identifying olfactory agonists and antagonists -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      behaviours, such as stimulation or suppression of appetite, sexual motivation, sexual attraction, aggression and for promoting or suppressing chemical communication between organisms. The present
                                                                              invention relates to olfactory and Pheromone G-protein coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence is a human olfactory and pheromone GPCR protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prevention or the treatment by stimulation of several mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 58; DB 23; Length 306;
Pred. No. 15;
2; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fuchs T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human olfactory receptor polypeptide, SEQ ID NO: 1345.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Glusman G,
Disclosure; Page 238-239; 833pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lancet D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG71664 standard; Protein; 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DIGI-) DIGISCENTS.
(YEDA ) YEDA RES & DEV CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127 LLLSHRVCLQLAGSAWACGV 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.9%;
60.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-OCT-1999; 99US-0158615.
24-FEB-2000; 2000US-0184809.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-OCT-2000; 2000WO-US27582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUL-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 LLLSLTLSLVLLGSSWGCGV
```

ಭ

```
AAG72355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seguence
                                                                                                                   Sequence
                                                                                                                                                       Query Match
                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                     AAG72355
                                                                                                                                                                                                                                                                                                                                                                                                           셤
88888888
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                              The present sequence is an olfactory receptor which is encoded by one of a number of novel polynucleotides. The polynucleotides can be used in screening for olfactory agonists and antagonists. The methods allow for the determination of primary scents and the identification of the odour receptors used to detect these primary scents. The methods also enable determination of secondary scents and the identification of combinations of odour receptors that are involved in detecting such secondary scents. This enables the construction of a scent representation (also called a scent fingerprint or scent profile), which may be used to re-create and edit scents. Libraries of olfactory receptors are useful for determining the interaction pattern of a composition with the receptors, and can be used for determining differences in the olfactory faculties of different individuals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is an olfactory receptor which is encoded by one of a number of novel polynuclectides. The polynuclectides can be used in screening for olfactory agonists and antagonists. The methods allow for the determination of primary scents and the identification of the odour receptors used to detect these primary scents. The methods also enable determination of secondary scents and the identification of combinations of odour receptors that are involved in detecting such secondary scents. This enables the construction of a scent representation
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; olfactory receptor; OR; primary scent determination; secondary scent determination; polypeptide library; odour receptor; scent profile; scent fingerprint; scent representation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polynucleotides which encode polypeptides involved in olfactory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glusman G, Fuchs T, Yanai I;
                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sensation for identifying olfactory agonists and antagonists -
                                                                                                                                                                                                                                                                                                                                                                 Score 58; DB 22; Length 312;
Pred. No. 15;
2; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human olfactory receptor polypeptide, SEQ ID NO: 1873.
                Claim 11; Page 830-831; 1857pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 1240; 1857pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAG72192 standard; Protein; 312 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lancet D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DIGI-) DIGISCENTS.
(YEDA ) YEDA RES & DEV CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133 LLLSHRVCLQLAGSAWACGV 152
                                                                                                                                                                                                                                                                                                                                                                     34.9%;
60.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                2 LLLSLTLSLVLLGSSWGCGV 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-OCT-2000; 2000WO-US27582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0158615.
2000US-0184809.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JUL-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 60.0
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smith D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-290713/30
                                                                                                                                                                                                                                                                                                                                   312 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200127158-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bellenson J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-APR-2001.
                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG72192;
                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAG72192
```

ŏ a

```
The present sequence is a polypeptide encoded by one of 344 newly mined human genes. It was used as a query sequence in a database search of chuman genes. It was used as a query sequence in a database search of chiactory receptor (ON) like sequences. The invention relates to isolated polynucleotides encoding polypeptides involved in olfactory sensation. The polynucleotides can be used in screening for olfactory agonists and antagonists. The methods allow for the determination of primary scents and the identification of the odour receptors used to detect these primary scents. The methods also enable determination of secondary scents and the identification of combinations of odour receptors that are involved in detecting such secondary scents. This enables the construction of a scent representation (also called a scent fingerprint or scent profile), which may be used to re-create and edit scents. Libraries of olfactory receptors are useful for determining the interaction pattern of a composition with the receptors, and can be individuals.
                                                                                                                                                                                                                                                                                                                                                               ö
(also called a scent fingerprint or scent profile), which may be used to re-create and edit scents. Libraries of olfactory receptors are useful for determining the interaction pattern of a composition with the receptors, and can be used for determining differences in the olfactory faculties of different individuals.
                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; olfactory receptor; OR; primary scent determination; secondary scent determination; polypeptide library; odour receptor; scent profile; scent fingerprint; scent representation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polynucleotides which encode polypeptides involved in olfactory
                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sensation for identifying olfactory agonists and antagonists
                                                                                                                                                                                                                                                                                                Length 312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human OR-like polypeptide query sequence, SEQ ID NO: 2036.
                                                                                                                                                                                                                                                                                                                                                               6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fuchs T,
                                                                                                                                                                                                                                                                                         DB 22;
15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glusman G,
                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                         34.9%; Score 58;
60.0%; Pred. No.
ive 2; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 6; Page 1364; 1857pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG72355 standard; Protein; 312 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith D, Lancet D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (DIGI-) DIGISCENTS.
(YEDA ) YEDA RES & DEV CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133 LLLSHRVCLQLAGSAWACGV 152
                                                                                                                                                                                                                                                                                                                                                                                                                                     2 LLLSLTLSLVLLGSSWGCGV 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-OCT-2000; 2000WO-US27582.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0158615
2000US-0184809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                              Local Similarity 60.0
hes 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-290713/30.
                                                                                                                                                                                                                          312 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200127158-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bellenson J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-OCT-1999;
24-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-APR-2001.
```

312 AA;

RESULT 12 AAB07181

ð

```
New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions -
                                                                                                                                                                                Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 8874; 21pp + Sequence Listing; English.
                                                                                                                                              Drosophila melanogaster polypeptide SEQ ID NO 8874.
                                     ABB60694 standard; Protein; 441 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li PWD,
                                                                                                                                                                                                                                                                                                                                                                                    23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                       Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity
Matches 14; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                           (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-656860
N-PSDB; ABL04797
                                                                                                                                                                                                                                                                           WO200171042-A2
                                                                                                                                                                                                     pharmaceutica]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human 5' EST
                                                                                                           26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUN-1999
                                                                                                                                                                                                                                                                                                              27-SEP-2001,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seguence
                                                                         ABB60694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY11650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
 RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY11650
                    4BB6069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is the protein sequence for the Drosophila melanogaster imaginal disc growth factor 3 (IGGF3). The sequence encoding this protein was used to isolate the IDGF4 coding sequence. IDGF4 is a member of the chitinase related proteins (CHRP) and is involved in the protein are expected to have mammalian homologues. The gene and the treatment of cancer, wound healing, tissue regeneration following arthritis, osteoporosis, other skeletal disorders and burns, for arthritis, osteoporosis, other skeletal disorders and burns, for arthritis, osteoporosis, other skeletal disorders and burns, for cevitalising scar tissue resulting from surgical procedures, irradiation, laceration, toxic chemicals, viral or bacterial infection or burns, to promote tissue growth during tissue engineering, for example tissues for skin graft replacements and bone regrowth, and to modulate the function of the female reproductive tract. In addition, they can also be used to increase meat, egg, sperm and milk production in animals. One possible method of use is by gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New imaginal disc growth factor polypeptide, useful for healing wounds, promoting tissue growth, modulating female reproductive tract functions and treating cell proliferative disorders such as cancer and metastasis
                                                                                                                                                                                                                                                                                                                                           Imaginal disc growth factor 3; IDGF3; chitinase related protein; CHRP; tissue growth; wound healing; bone repair; cartilage repair; angiogenesis; meat production; milk production; cancer; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 441;
DB 22; Length 312;
15;
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                           Drosophila melanogaster imaginal disc growth factor 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.4%; Score 55.5; DB 21; 48.3%; Pred. No. 47;
                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5; Mismatches
                                   2; Mismatches
34.9%; Score 58;
60.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 LLLSLTLSLVLLGSSWGCGVPAITPALSY 30
                                                                                                                                                                                               AAB07181 standard; Protein; 441 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 4; 40pp; English.
                                                                                            133 LLLSHRVCLQLAGSAWACGV 152
                                                                     2 LLLSLTLSLVLLGSSWGCGV 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0052778.
                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 48.3 tes 14; Conservative
                Local Similarity 60.0
nes 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bryant PJ, Kawamura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-349702/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   441 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAR-1998;
                                                                                                                                                                                                                                                                       22-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                          US6060590-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-MAY-2000
                                                                                                                                                                                                                                   AAB07181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                   Matches
```

Myers EW;

```
ï
                                     ‡3
                                                                                                                                                                                                                                                                            The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                      capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental blology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmacecutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30311), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; secreted protein; EST; expressed sequence tag; diagnosis; forensic; gene therapy; chromosome mapping; signal peptide; upstream regulatory sequence; cytokine activity; cell proliferation;
The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 441;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      secreted protein SEQ ID NO:302.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.4%; Score 55.5; 48.3%; Pred. No. 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210 LLLSLTV-LPNVNSSWYYDAPSIAPSLDF 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 LLLSLTLSLVLLGSSWGCGVPAITPALSY 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY11650 standard; Protein; 123 AA
```

à

```
Sequence
    Domain
                              Domain
                                                         Domain
    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                              human secreted proteins, and encode the proteins given in AAY11533 to human secreted proteins, and encode the proteins given in AAY11533 to AAY11679, respectively. The proteins given represent the signal peptide and an N-terminal fragment of a secreted protein. The nucleic acid sequences can be used for producing secreted human gene products. They can also be used to develop products for diagnosis and therapy. The proteins obtained may have crytokine activity, cell proteins obtained may have crytokine activity, cell proteins obtained may have crytokine activity, haematopoiesis requiating activity, tissue growth regulating activity, reproductive hormone regulating activity, receptor/ligand activity, haemostatic and thrombolytic activity, receptor/ligand activity, anti-inflammatory activity, tumour inhibition activity or other activities. The products can be used in forensic, gene therapy and chromosome mapping proceducts. The sequences can also be used for obtaining corresponding promoter sequences. The nucleic acids encoding the signal peptide can be used for directing extracellular secretion of a polypeptide or the insertion of a polypeptide into a membrane, or importing a polypeptide into a cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
differentiation; haematopoiesis regulation; tissue growth regulation; reproductive hormone regulation; chemotactic; chemokinetic; haemostatic; thrombolytic; anti-inflammatory; tumour inhibition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                    New nucleic acids encoding human secreted proteins - obtained from CDNA libraries derived from liver, lung, large intestine, colon, thyroid and pancreas tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 55; DB 20; Length 123;
Pred. No. 14;
5; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Flt-3 ligand; flt3-L; anemia; cancer; AIDS; gene therapy.
                                                                                                                                                                                                                     Lacroix
                                                                                                                                                                                                                                                                                                                                         Claim 27; Page 379-380; 398pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 LLSLTLSLVLLGSSWGCGVPAITPALS 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= Sig_peptide
                                                                                                                                                                                                                   Duclert A, Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR67540 standard; Protein; 231 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 33.1%;
Best Local Similarity 40.7%;
Matches 11; Conservative
                                                                                                                                      98WO-IB01233
                                                                                                                                                                97US-0904468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                             WPI; 1999-153700/13.
N-PSDB; AAX40368.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse flt-3 ligand.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 AA;
                                                                                                                                                                                          (GEST ) GENSET
                                                                                                                                      31-JUL-1998;
                                                                                                                                                                01-AUG-1997;
                                                        Homo sapiens
                                                                                 409906439-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-AUG-1995
                                                                                                            11-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR67540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR67540
  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA encoding mouse flt3-ligand (flt3-L) was isolated from a cDNA library of T-cell line PTB-0.344 in CV-1/EBNA-1 cells using a slide anchadiography method. Flt3-L stimulates production of progenitor and stem cells, and can be used e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 16; Length 231; 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated ligands for flt 3 receptors - useful for treating anaemia, AIDS and various cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Indels
28..188
/label= Extracellular_domain
189..211
                                                        /label= Transmembrane_domain
212..231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 55; DB 1
Pred. No. 27;
4; Mismatches
                                                                                                /label= Cytoplasmic_domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search completed: December 20, 2002, 15:16:42 Job time : 6.08696 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 25-27; 33pp; English.
                                                                                                                                                                                                                                                                                 93US-0106463.
93US-0111758.
93US-0162407.
94US-0209502.
94US-0243545.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.1%;
61.1%;
                                                                                                                                                                                                                         94EP-0303575
                                                                                                                                                                                                                                                                 93US-0068394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :||| | |:|||| ::||
192 LLLLLEPLTLVLLAAAWG 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MLLLSLTLSLVLLGSSWG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in gene therapy protocols.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 33.1
Best Local Similarity 61.1
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Beckmann MP, Lyman SD;
                                                                                                                                                                                                                                                                                                                                                                                                            (IMMV ) IMMUNEX CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-008071/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAQ79076
                                                                                                                                                                                                                                                                                 12-AUG-1993;
25-AUG-1993;
03-DEC-1993;
07-MAR-1994;
11-MAY-1994;
                                                                                                                                                                                                                           19-MAY-1994;
                                                                                                                                                                                                                                                                 24-MAY-1993
                                                                                                                                        EP627487-A.
```